

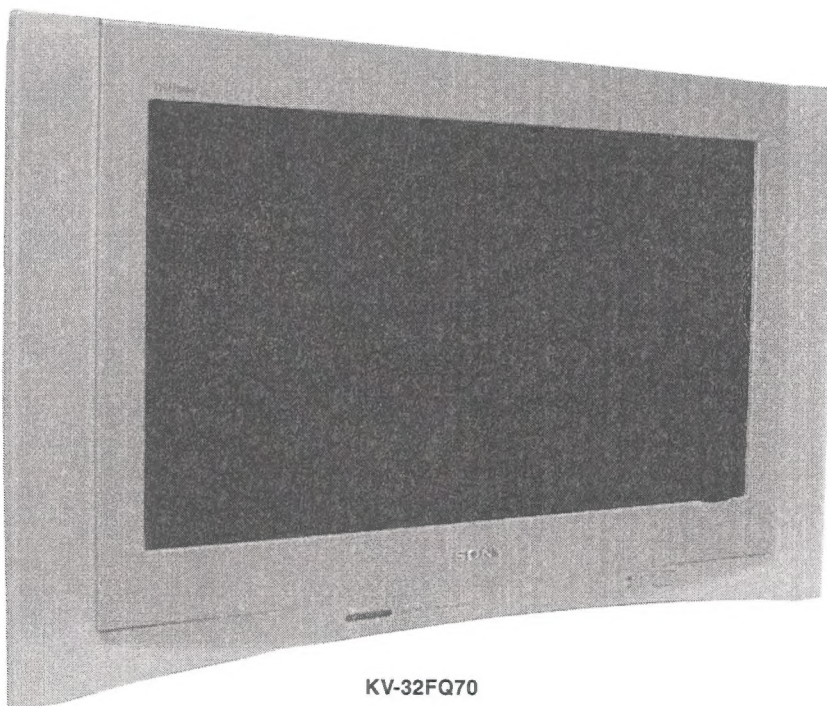
**Self Diagnosis**  
Supported model

# SERVICE MANUAL

## AE-6B CHASSIS

MODEL	COMMANDER	DEST	CHASSIS NO.	MODEL	COMMANDER	DEST	CHASSIS NO.
<b>KV-32FQ70B</b>	RM-938	FR	SCC-Q83N-A	<b>KV-32FQ70K</b>	RM-938	OIRT	SCC-Q82J-A
<b>KV-32FQ70E</b>	RM-938	ESP	SCC-Q81Q-A	<b>KV-32FQ70U</b>	RM-938	UK	SCC-Q84N-A

## FD Trinitron



KV-32FQ70



RM-938

TRINITRON® COLOR TV  
**SONY®**

# TABLE OF CONTENTS

Section	Title	Page	Section	Title	Page
	Caution .....	3	<b>5. DIAGRAMS</b>		
	Specifications .....	4	5-1.	Block Diagrams (1) .....	25
	Connectors .....	6		Block Diagrams (2) .....	26
	Self Diagnostic Software .....	7		Block Diagrams (3) .....	27
<b>1. GENERAL</b>				Block Diagrams (4) .....	28
	Switching On the TV and		5-2.	Circuit Board Location .....	28
	Automatically Tuning .....	8	5-3.	Schematic Diagrams and	
	Introducing and Using the Menu			Printed Wiring Boards .....	28
	System .....	9		* A Board Schematic .....	29
	Menu Guide .....	9		* A Board PWB .....	35
	Teletext .....	10		* F1 Board Schematic .....	39
	Fastext .....	10		* F1 Board PWB .....	40
	Remote Control Configuration			* H1 Board Schematic .....	39
	for VCR/DVD .....	11		* H1 Board PWB .....	40
	Specifications .....	11		* VM Board Schematic .....	39
	Troubleshooting .....	12		* VM Board PWB .....	40
<b>2. DISASSEMBLY</b>				* G Board Schematic .....	41
	2-1. Rear Cover Removal .....	13		* G Board PWB .....	40
	2-2. Speaker Connector Disconnection.....	13		* C Board Schematic .....	42
	2-3. Chassis Removal and Refitting .....	13		* C Board PWB .....	43
	2-4. Service Position .....	14		* M2 Board Schematic .....	44
	2-5. G Board Removal .....	14		* M2 Board PWB .....	43
	2-6. D2 Board Removal .....	14		* D2 Board Schematic .....	45
	2-7. D Board Removal .....	14		* D2 Board PWB .....	43
	2-8. M2 Board Removal .....	15		* D Board Schematic .....	47
	2-9. Service Connector for M2 Board.....	15		* D Board PWB .....	46
	2-10. Wire Dressing .....	15	5-4.	Semiconductors .....	48
	2-11. Picture Tube Removal .....	16	5-5.	IC Blocks .....	51
	Bottom Plates .....	17	<b>6. EXPLODED VIEWS</b>		
<b>3. SET-UP ADJUSTMENTS</b>			6-1.	Chassis .....	53
	3-1. Beam Landing .....	18	6-2.	Picture Tube .....	54
	3-2. Convergence .....	19	<b>7. ELECTRICAL PARTS LIST</b>		55
	3-3. Focus Adjustment .....	21			
	3-4. Screen (G2), White Balance .....	21			
<b>4. CIRCUIT ADJUSTMENTS</b>					
	4-1. Electrical Adjustments .....	22			
	4-2. Test Mode 2 .....	24			

## CAUTION

SHORT CIRCUIT THE ANODE OF THE PICTURE TUBE AND THE ANODE CAP TO THE METAL CHASSIS, CRT SHIELD, OR THE CARBON PAINTED ON THE CRT, AFTER REMOVAL OF THE ANODE CAP.

## WARNING !!

AN ISOLATION TRANSFORMER SHOULD BE USED DURING ANY SERVICE WORK TO AVOID POSSIBLE SHOCK HAZARD DUE TO LIVE CHASSIS, THE CHASSIS OF THIS RECEIVER IS DIRECTLY CONNECTED TO THE POWER LINE.

## SAFETY-RELATED COMPONENT WARNING !!

COMPONENTS IDENTIFIED BY SHADING AND MARKED  $\Delta$  ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND IN THE PARTS LIST ARE CRITICAL FOR SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

## ATTENTION

APRES AVOIR DECONNECTE LE CAP DE L'ANODE, COURT-CIRCUITER L'ANODE DU TUBE CATHODIQUE ET CELUI DE L'ANODE DU CAP AU CHASSIS METALLIQUE DE L'APPAREIL, OU AU COUCHE DE CARBONE PEINTE SUR LE TUBE CATHODIQUE OU AU BLINDAGE DU TUBE CATHODIQUE.

## ATTENTION !!

AFIN D'EVITER TOUT RISQUE D'ELECTROCUTION PROVENANT D'UN CHÂSSIS SOUS TENTION, UN TRANSFORMATEUR D'ISOLEMENT DOIT ETRE UTILISÉ LORS DE TOUT DÉPANNAGE LE CHÂSSIS DE CE RÉCEPTEUR EST DIRECTMENT RACCORDÉ À L'ALIMENTATION SECTEUR.

## ATTENTION AUX COMPOSANTS RELATIFS À LA SÉCURITÉ!!

LES COMPOSANTS IDENTIFIÉS PAR UNE TRAME ET PAR UNE MARQUE  $\Delta$  SUR LES SCHÉMAS DE PRINCIPE, LES VUES EXPLOSÉES ET LES LISTES DE PIÉCES SONT D'UNE IMPORTANCE CRITIQUE POUR LA SÉCURITÉ DU FONCTIONNEMENT, NE LES REMPLACER QUE PAR DES COMPSANTS SONY DONT LE NUMÉRO DE PIÉCE EST INDIQUÉ DANS LE PRÉSENT MANUEL OU DANS DES SUPPLÉMENTS PUBLIÉS PAR SONY.



## CAUTION

### Lead Free Soldered Boards

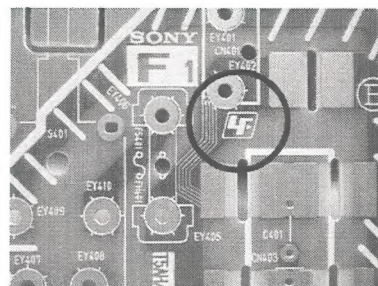
The circuit boards listed below [Table 1] used in these models may have been processed using Lead Free Solder. The boards are identified by the LF logo located close to the board designation e.g. F1, H1 etc [ see examples ]. The servicing of these boards requires special precautions to be taken as outlined below.



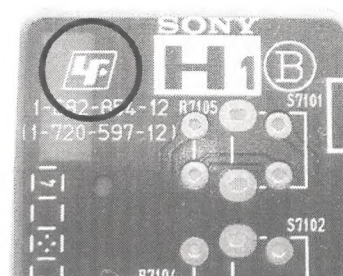
Table 1

Board	Function
C	R,G,B Out
F1	Power Switch/Fuse/SIRCS/Standby LED
H1	Front AV Input/Headphone and Control Switches

example 1



example 2



It is strongly recommended to use Lead Free Solder material in order to guarantee optimal quality of new solder joints. Lead Free Solder is available under the following part numbers :

Partnumber	Diameter	Remarks
7-640-005-19	0.3mm	0.25Kg
7-640-005-20	0.4mm	0.50Kg
7-640-005-21	0.5mm	0.50Kg
7-640-005-22	0.6mm	0.25Kg
7-640-005-23	0.8mm	1.00Kg
7-640-005-24	1.0mm	1.00Kg
7-640-005-25	1.2mm	1.00Kg
7-640-005-26	1.6mm	1.00Kg

Due to the higher melting point of Lead Free Solder the soldering iron tip temperature needs to be set to 370 degrees centigrade. This requires soldering equipment capable of accurate temperature control coupled with a good heat recovery characteristics.

For more information on the use of Lead Free Solder, please refer to <http://www.sony-training.com>


ITEM MODEL	Television System	Stereo System	Channel Coverage	Color System
B	B/G/H, D/K, I, L	GERMAN/NICAM Stereo	VHF : E2-E12, R1-R12, S01-S03, F02-F10, B-Q UHF : E21-E69, F21-F69, B21-B69, R21-R69 CABLE TV : S01-S20 HYPER : S21-S41	PAL, SECAM NTSC4.43, NTSC3.58 (VIDEO IN)
E	B/G/H, D/K	GERMAN/NICAM Stereo	VHF : E2-E12, R1-R12, S01-S03 UHF : E21-E69, R21-R69 CABLE TV : S01-S20 HYPER : S21-S41	PAL, SECAM NTSC4.43, NTSC3.58 (VIDEO IN)
K	B/G/H, D/K	GERMAN/NICAM Stereo	VHF : E2-E12, R1-R12, S01-S03 UHF : E21-E69, R21-R69 CABLE TV : S01-S20 HYPER : S21-S41	PAL, SECAM NTSC4.43, NTSC3.58 (VIDEO IN)
U	I	NICAM Stereo	UHF : B21-B69	PAL, SECAM NTSC4.43, NTSC3.58 (VIDEO IN)

Picture Tube	Flat Display FD Trinitron Approx 82 cm (32 inches) (Approx 76 cm picture measured diagonally)	Sound output	
		Right and Left speaker	2x20W (Music Power)    2x10W (RMS)
		Sub Woofer	1x30W (Music Power)    1x15W (RMS)
Input/Output Terminals [REAR]		General Specifications	
1: 21-pin Euro connector (CENELEC standard)	Inputs for Audio and Video signals. Inputs for RGB. Outputs of TV Video and Audio signals.	Power Requirements	220 - 240V
		Power Consumption	130W
2: 21-pin Euro connector	Inputs for Audio and Video signals. Inputs for RGB. Outputs of TV Video and Audio signals. (Monitor Out)	Dimensions	Approx 910x586x586mm
		Weight	Approx 64kg
3: 21-pin Euro connector	Inputs for Audio and Video signals. Inputs for S Video. Outputs of TV Video and Audio signals. (selectable)	Supplied Accessories	RM-938 Remote Commander (1) IEC designated R6 battery (2)
Phono Jacks	Output Connectors variable for Audio Signals	Other Features	100 Hz picture, DNR, Auto Noise Reduction, Teletext, Smartlink, BBE, Virtual Dolby
Input/Output Terminals [SIDE]		Remote Control System : Infrared Control	
Headphone jack	stereo mini jack	Power requirements	3V dc 2 batteries IEC designation R6 (size AA)
Audio inputs	phono jacks		
Video inputs	phono jacks		
S Video input	4 pin DIN		
Design and specifications are subject to change without notice.			



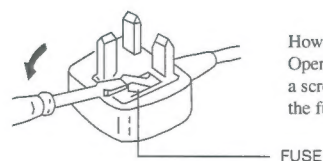
Model Name Item	KV-32FQ70B	KV-32FQ70E	KV-32FQ70K	KV-32FQ70U
Pal Comb	OFF	OFF	OFF	OFF
PIP	OFF	OFF	OFF	OFF
RGB Priority	ON	ON	ON	ON
Woofer Box	ON	ON	ON	ON
Scart 1	ON	ON	ON	ON
Scart 2	ON	ON	ON	ON
Scart 3	ON	ON	ON	ON
Side in (4)	ON	ON	ON	ON
Projector	OFF	OFF	OFF	OFF
Norm B/G	ON	ON	ON	OFF
Norm I	ON	OFF	OFF	ON
Norm D/K	ON	ON	ON	OFF
Norm AUS	OFF	OFF	OFF	OFF
Norm L	ON	OFF	OFF	OFF
Norm SAT	OFF	OFF	OFF	OFF
Norm M	OFF	OFF	OFF	OFF
Teletext	ON	ON	ON	ON
Nicam Stereo	ON	ON	ON	ON

### WARNING (UK Models only)

The flexible mains lead is supplied connected to a **B.S. 1363** fused plug having a fuse of **5 AMP** rating. Should the fuse need to be replaced, use a **5 AMP FUSE** approved by ASTA to **BS 1362**, ie one that carries the  mark.

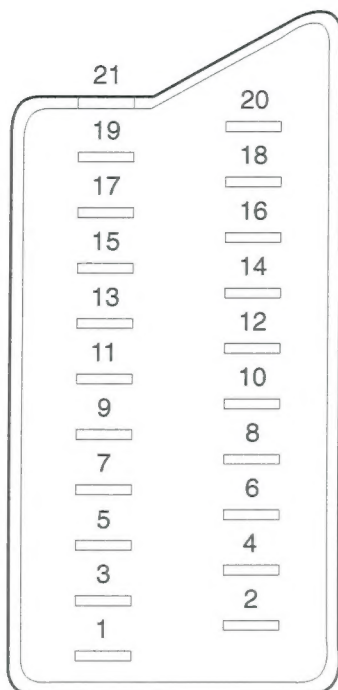
IF THE PLUG SUPPLIED WITH THIS APPLIANCE IS NOT SUITABLE FOR THE OUTLET SOCKETS IN YOUR HOME, IT SHOULD BE CUT OFF AND AN APPROPRIATE PLUG FITTED. THE PLUG SEVERED FROM THE MAINS LEAD MUST BE DESTROYED AS A PLUG WITH BARED WIRES IS DANGEROUS IF ENGAGED IN A LIVE SOCKET.

When an alternative type of plug is used, it should be fitted with a **5 AMP FUSE**, otherwise the circuit should be protected by a **5 AMP FUSE** at the distribution board.



How to replace the fuse.  
Open the fuse compartment with a screwdriver blade and replace the fuse.

## 21 pin connector



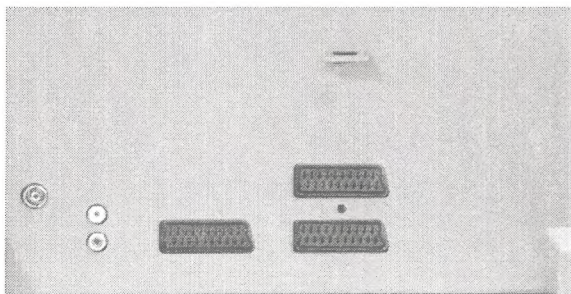
Pin No	1	2	3	Signal	Signal level
1	○	○	○	Audio output B (right)	Standard level : 0.5V rms Output impedance : Less than 1kohm*
2	○	○	○	Audio input B (right)	Standard level : 0.5V rms Output impedance : More than 10kohm*
3	○	○	○	Audio output A (left)	Standard level : 0.5V rms Output impedance : Less than 1kohm*
4	○	○	○	Ground (audio)	
5	○	○	○	Ground (blue)	
6	○	○	○	Audio input A (left)	Standard level : 0.5V rms Output impedance : More than 10kohm*
7	○	●	●	Blue input	0.7 +/- 3dB, 75 ohms positive
8	○	○	○	Function select (AV control)	High state (9.5-12V) : Part mode Low state (0-2V) : TV mode Input impedance : More than 10K ohms Input capacitance : Less than 2nF
9	○	○	○	Ground (green)	
10	○	○	○	Open	
11	○	●	●	Green	Green signal : 0.7 +/- 3dB, 75 ohms, positive
12	○	○	○	Open	
13	○	○	○	Ground (red)	
14	○	○	○	Ground (blanking)	
15	○	-	-	Red input	0.7 +/- 3dB, 75 ohms, positive
	-	○	○	(S signal Chroma input)	0.3 +/- 3dB, 75 ohms, positive
16	○	●	●	Blanking input (Ys signal)	High state (1-3V) Low state (0-0.4V) Input impedance : 75 ohms
17	○	○	○	Ground (video output)	
18	○	○	○	Ground (video input)	
19	○	○	○	Video output	1V +/- 3dB, 75ohms, positive sync 0.3V (-3+10dB)
20	○	-	-	Video input	1V +/- 3dB, 75ohms, positive sync 0.3V (-3+10dB)
	-	○	○	Video input Y (S signal)	1V +/- 3dB, 75ohms, positive sync 0.3V (-3+10dB)
21	○	○	○	Common ground (plug, shield)	

○ Connected

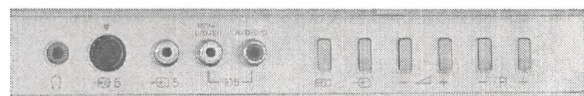


Not Connected (open) \* at 20Hz - 20kHz

## Rear Connection Panel



## Front Connection Panel



**S-Video socket**

S Video socket pin configuration		
Pin No	Signal	Signal Level
1	Ground	-
2	Ground	-
3	Y (S signal) input	1V +/- 3dB 75ohm, positive Sync. 0.3V -3 +10dB
4	C (S signal) input	0.3V +/- 3dB 75ohm, positive Sync.



## AE-6B SELF DIAGNOSTIC SOFTWARE

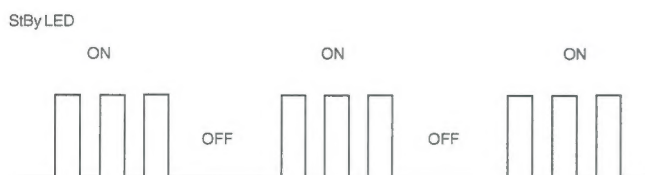
The identification of errors within the AE-6B chassis is triggered in one of two ways :- 1: Busy or 2: Device failure to respond to IIC. In the event of one of these situations arising the software will first try to release the bus if busy (Failure to do so will report with a continuous flashing LED) and then communicate with each device in turn to establish if a device is faulty. If a device is found to be faulty the relevant device number will be displayed through the LED (Series of flashes which must be counted) See table 1, non fatal errors are reported using this method.

Each time the software detects an error it is stored within the NVM. See Table 2.

**Table 1**

Error Message	LED Code
No error	00
Reserved	01
OCP ( Over Current Protection )	02
Over Voltage Protection	03
No Vertical Sync	04
IKR Error at power on	05
IIC bus clock and/or data lines low at power on	06
NVM no IIC bus acknowledge at power on	07
Horizontal Protection	08
Tuner no acknowledge at power on	09
Sound Processor Error	10
Reserved	11
Scanrate Error	12
DAC Error	13
Backend Error	14
Dynamic Convergence Error	15
PIP Error	16

### Flash Timing Example : e.g. error number 3



### How to enter into Table 2

1. Turn on the main power switch of the TV set.
2. Program Remote Commander for Operation in Service Mode. [See Page 22].
3. Press 'VIDEO' 'VIDEO' > 'MENU' on the Remote Commander.
4. Using the Remote Commander, Scroll to the 'Error Menu' item using the down arrow key, then press the right arrow key.
5. The following table will be displayed indicating the error count.

**Table 2**

ERROR MENU			
E02	OCP	(0, 255)	0
E03	OVP	(0, 255)	0
E04	VSYNC	(0, 255)	0
E05	IKR	(0, 255)	0
E06	IIC	(0, 255)	0
E07	NVM	(0, 255)	0
E08	HPROT	(0, 255)	0
E09	TUNER	(0, 255)	0
E10	SOUNDP	(0, 255)	0
E11	-	(0, 255)	0
E12	SCANRATE	(0, 255)	0
E13	DAC	(0, 255)	0
E14	BACKEND	(0, 255)	0
E15	DYN CON	(0, 255)	0
E16	PIP	(0, 255)	0
WORKING TIME			
HOURS			14
MINUTES			7

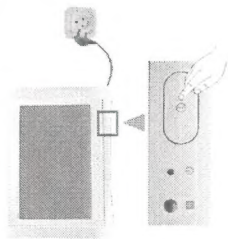
**Note:** To clear the error count data press '80' on the Remote commander.

The operating instructions mentioned here are partial abstracts from the 'Operating Instruction Manual'. The page numbers of the 'Operating Instruction Manual' remain as in the manual.

## Switching On the TV and Automatically Tuning

- The first time you switch on your TV, a sequence of menu screens appear on the TV enabling you to: 1) choose the language of the menu screen, 2) adjust the picture slant, 3) search and store all available channels (TV Broadcast) and 4) change the order in which the channels (TV Broadcast) appear on the screen. However, if you need to change any of these settings at a later date, you can do that by selecting the appropriate option in the **Set Up** menu (Set Up menu) or by pressing the **Auto Start Up** button on the TV set.

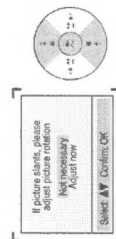
- Connect the TV plug to the mains socket (220-240V AC, 50Hz). The first time that the TV set is connected, it is usually turned on. If the TV is off, press the **On/Off** button on the TV set to turn on the TV. The first time you switch on the TV, a **Language** menu displays automatically on the TV screen.



- Press the **Left** or **Right** button on the remote control to select the language, then press the **OK** button to confirm your selection. From now on all the menus will appear in the selected language.



- Because of the earth's magnetism, the picture might slant. The **Picture Rotation** menu allows you to correct the picture slant if it is necessary.
  - If it is not necessary, press **OK** to select **Not necessary**.
  - If it is necessary, press **Left** or **Right** to select **Adjust now**, then press **OK** and correct any slant of the picture between -5 and +5 by pressing **Left** or **Right**. Finally press **OK** to store.



continued...

- The **Auto Tuning** menu appears on the screen. Press the **OK** button to select **Yes**.



- The TV starts to automatically search and store all available broadcast channels for you.



This procedure could take some minutes. Please be patient and do not press any buttons, otherwise automatic tuning will not be completed.

- In some countries the TV Broadcaster installs the channels automatically (ACI system). In this case, the TV Broadcaster sends a menu in which you can select your city by pressing the **Left** or **Right** button and **OK** to store the channels.

- If no channels were found during the auto tuning process then a new menu appears automatically on the screen asking you to connect the aerial. Please connect the aerial (see page 6) and press **OK**. The auto tuning process will start again.

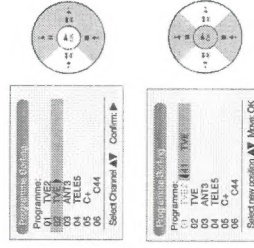


- After all available channels are captured and stored, the **Programme Sorting** menu automatically appears on the screen enabling you to change the order in which the channels appear on the screen.

- If you wish to keep the broadcast channels in the tuned order, go to step 7.

- If you wish to store the channels in a different order:

- Press the **Left** or **Right** button to select the programme number with the channel (TV Broadcast) you wish to rearrange, then press the **Left** button.
- Press the **Left** or **Right** button to select the new programme number position for your selected channel (TV Broadcast), then press **OK**.
- Repeat steps b1 and b2 if you wish to change the order of the other channels.



- Press the **MENU** button to remove the menu from the screen.



Your TV is now ready for use



## Introducing and Using the Menu System

**1** Your TV uses an on-screen menu system to guide you through the operations. Use the following buttons on the Remote Control to operate the menu system:

**1** Press the MENU button to switch the first level menu on.



**2** To highlight the desired menu or option, press  $\blacktriangle$  or  $\blacktriangledown$ .

- To enter the selected menu or option, press  $\rightarrow$ .
- To return to the last menu or option, press  $\leftarrow$ .
- To alter the settings of your selected option, press  $\blacktriangle$  /  $\blacktriangledown$  or  $\rightarrow$  /  $\leftarrow$ .
- To confirm and store your selection, press OK.



**3** Press the MENU button to remove the menu from the screen.



## Menu Guide

**Level 1** **Level 2** **Level 3 / Function**



**PICTURE ADJUSTMENT**  
The "Picture Adjustment" menu allows you to alter the picture adjustments.

To do this: after selecting the item you want to alter press  $\blacktriangle$  then press  $\blacktriangle$  /  $\blacktriangledown$  or  $\rightarrow$  /  $\leftarrow$  repeatedly to adjust it and finally press OK to store the new adjustment.

- 1** • This menu also allows you to customise the picture mode based on the programme you are watching:
- Picture Mode**  $\rightarrow$  **Live** (for live broadcast programmes, DVD and Digital Set Top Box receivers), **Personal** (for individual settings), **Movie** (for films).

- **Brightness, Colour and Sharpness** can only be altered if "Personal" mode is selected.
- **Hue** is only available for NTSC colour signal (e.g. USA video tapes).
- Select **Reset** and press OK to reset the picture to the factory preset levels.
- The **Noise Reduction** option is set to **AUTO** to automatically reduce the picture noise visible in the broadcast signal. To cancel this function, select "Off" instead of "AUTO".

continued...

**Level 1**

**Level 2**

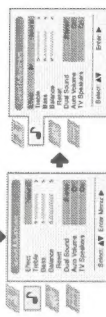
**Level 3 / Function**



**SOUND ADJUSTMENT**

The "Sound Adjustment" menu allows you to alter the sound adjustments.

To do this: after selecting the item you want to alter, press  $\blacktriangle$ . Then press  $\blacktriangle$  /  $\blacktriangledown$  or  $\rightarrow$  /  $\leftarrow$  repeatedly to adjust it and finally press OK to store the new adjustment.



**Effect**

- $\rightarrow$  **Natural**: Enhances clarity, detail and presence of sound by using "BBE High Definition Sound system".\*
- $\rightarrow$  **Dynamic**: "BBE High Definition Sound system" intensifies clarity and presence of sound for better intelligibility and musical realism.
- $\rightarrow$  **Dolby\*\*V**: Dolby Virtual, simulates the sound effect of "Dolby Surround Pro Logic".
- $\rightarrow$  **Off**: Flat response.

- Treble**  $\rightarrow$  Less  $\rightarrow$  More
- Bass**  $\rightarrow$  Less  $\rightarrow$  More
- Balance**  $\rightarrow$  Left  $\rightarrow$  Right
- Reset**  $\rightarrow$  OK: Resets the sound to the factory preset levels.
- Dual Sound**  $\rightarrow$ 
  - For a stereo broadcast:  $\rightarrow$  Mono.
  - For a bilingual broadcast:  $\rightarrow$  Stereo.

GB

**Auto Volume**  $\rightarrow$

- $\rightarrow$  **Off**: volume level changes according to the broadcast signal.
- $\rightarrow$  **On**: volume level of the channels will stay the same, independent of the broadcast signal (e.g. in the case of advertisements).

**TV Speakers**  $\rightarrow$



- $\rightarrow$  **On**: to listen to the TV from the set speakers.
- $\rightarrow$  **Off**: to listen to the TV from an external amplifier connected to the audio outputs on the rear of the TV set.



- If you are listening to the TV through headphones, the "Effect" option will automatically be switched to "Off".
- If you select "Dolby Virtual" on the "Effect" option, the "Auto Volume" option will automatically be switched to "Off" and vice versa.
- \* The "BBE High Definition Sound system" is manufactured by Sony Corporation under license from BBE Sound, Inc. It is covered by U.S. Patent No. 4,638,258 and No. 4,482,866. The word "BBE" and BBE Symbol are trademarks of BBE Sound, Inc.
- \*\* This TV has been designed to create the "Dolby Surround" sound effect by simulating the sound of four speakers with two speakers, which the broadcast audio signal is Dolby Surround encoded. The sound effect can also be improved by connecting a suitable external amplifier (for details refer to "Connecting to external audio Equipment" on page 21).
- \*\* Manufactured under license from Dolby Laboratories. "Dolby", "Pro Logic" and the double-D symbol are trademarks of Dolby Laboratories.

continued...

Level 1
Level 2
Level 3 / Function

**MANUAL PROGRAMME PRESET**  
The "Manual Programme Preset" option in the "Set Up" menu allows you to:

**a)** Preset channels or the VCR channel one by one to the programme order of your choice.  
To do this:

- After selecting the "Manual Programme Preset" option, press **➡** then with **Programme** option highlighted press **➡**. Press **➡** or **⬅** to select which programme number you want to preset the channel on (for VCR, select programme number "0"). Then press **⬅**.

**2** After selecting the **Channel** option, press **➡**. Then press the number buttons to enter directly the channel number of the TV Broadcast or the channel of the VCR signal. If you do not know the channel number, press **➡** or **⬅** to search for it. When you have tuned the desired channel, press **OK** twice to store.

*Repeat all the above steps to tune and store more channels.*

**b)** Label a channel using up to five characters.  
To do this: Highlighting the **Programme** option, press the **PROG +/-** button to select the programme number with the channel you wish to name. When the programme you want to name appears on the screen, select the **Label** option and press **➡**. Next press **➡** or **⬅** to select a letter, number or "." for a blank. Press **➡** to confirm this character. Select the other four characters in the same way. After selecting all the characters, press **OK** twice to store.

**c)** Fine tune the broadcast reception. Normally the automatic fine tuning (AFT) will give the best possible picture, however you can manually fine tune the TV to obtain a better picture reception in case the picture is distorted.  
To do this: while watching the channel (TV Broadcast) you wish to fine tune, select the **AFT** option and press **➡**. Next press **➡** or **⬅** to adjust the fine tuning between -15 and +15. Finally press **OK** twice to store.

**d)** Skip any unwanted programme numbers when they are selected with the **PROG +/-** buttons.  
To do this: Highlighting the **Programme** option, press the **PROG +/-** button to select the programme number you want to skip. When the programme you want to skip appears on the screen, select the **Skip** option and press **➡**. Next press **➡** or **⬅** to select **Yes**. Finally press **OK** twice to confirm and store.

*To cancel this function afterwards, select "No" instead of "Yes" in the step above.*

continued...

## Teletext

**i** Teletext is an information service transmitted by most TV stations. The index page of the teletext service (usually page 100) gives you information on how to use the service. To operate teletext, use the remote control buttons as indicated below.

**A** Teletext errors may occur if you use a channel (TV Broadcast) with a weak signal.

### To switch on Teletext :

After selecting the TV channel which carries the teletext service you wish to view, press **⏏**.



### To select a Teletext page:

Input 3 digits for the page number, using the numbered buttons.

- If you make a mistake, retype the correct page number.
- If the counter on the screen continues searching, it is because the page is not available. If this is the case, input another page number

### To access the next or preceding page:

Press **PROG + (➡)** or **PROG - (⬅)**.

### To superimpose teletext on to the TV:

Whilst you are viewing teletext, press **⏏**. Press it again to cancel teletext mode.

### To freeze a teletext page:

Press **⏏** / **⏏**. Press it again to cancel the freeze.

### To reveal concealed information (e.g: answer to a quiz):

Press **⏏** / **⏏**. Press it again to conceal the information.

### To select a sub page:

A teletext page may consist of several sub pages. In this case the page number that appears on the upper left corner will change from white to green and one or more arrows will appear next to the page number. Repeatedly press the **⬅** or **➡** buttons on the remote control to watch the desired sub page.

### To Switch Off Teletext:

Press **⏏**.

## Fastext

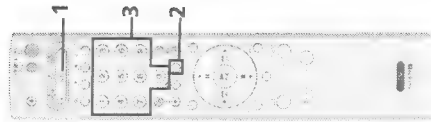
**i** Fastext service lets you access Teletext pages with one button push. When you are in Teletext mode and Fastext is broadcast, a colour coded menu appears at the bottom of the teletext page. Press the appropriate coloured button (red, green, yellow or blue) to access the page corresponding to your menu choice.



## Remote Control Configuration for VCR/DVD

In it's default condition this remote control will operate the basic functions of this Sony TV, Sony DVDs and most Sony VCRs. To control VCRs and DVDs of other manufacturers (and some Sony VCR models), please complete the following steps:

**1** Before you start, look up the 3 digit code for your brand of DVD or VCR from the list below. On those brands that have more than one code, enter the first code number.



**1** Press the Media Selector button on the remote control repeatedly until the required green light (VCR or DVD) is lit.

**2** If Media Selector is on TV position, code numbers will not be stored.

**3** Before the green light goes out, press and hold the yellow button for approximately 6 seconds until the green light starts flashing.

**4** Whilst the green light is flashing, enter all three digits of the code for your brand of VCR or DVD using the number buttons on the remote control.

**5** If your selected code is entered correctly, all three green lights will be lit momentarily.

**6** Turn on your VCR or DVD and check that the main functions work.

**7** If your device is not working or some of the functions do not work please check that you entered the correct code set or try the next code listed against the brand.

• Your brand codes may be lost if weak batteries are not replaced within a few minutes. To reset your brand of DVD or VCR please repeat the above steps. A small label is added inside the battery door to allow you to record your brand codes.

• Not all brands are covered and not all models of every brand may be covered.

### VCR Brand List

Brand	Code
SONY (VHS)	301, 302, 303, 308, 309
SONY (BETA)	303, 307, 310
SONY (DV)	304, 305, 306
AIWA	325, 331, 351
AKAI	326, 329, 330
DAEWOO	342, 343
GRUNDIG	358, 355, 360, 361, 320, 351
HITACHI	327, 333, 334
JVC	314, 315, 322, 344, 352, 353, 354, 348, 349
LG	332, 338
LOEWE	356, 355, 360, 361, 320, 351
MATSUI	356, 357
ORION	328
PANASONIC	321, 323
PHILIPS	311, 312, 313, 316, 317, 318, 358, 359
SAMSUNG	339, 340, 341, 345
SANYO	335, 336
SHARP	324
THOMSON	319, 350
TOSHIBA	337

### DVD Brand List

Brand	Code
SONY	001
AIWA	021
DENON	018, 027, 020, 002
GRUNDIG	009, 028, 023, 024, 016, 003
HITACHI	025, 026, 015, 004
JVC	006, 017
KENWOOD	008
LG	015, 014
LOEWE	009, 028, 023, 024, 016, 003
MATSUI	013, 016
ONKYO	022
PANASONIC	018, 027, 020, 002
PHILIPS	009, 028, 023, 024, 016, 003
PIONEER	004
SAMSUNG	011, 014
SANYO	007
SHARP	019, 027
THOMSON	012
TOSHIBA	003
YAMAHA	018, 027, 020, 002

## Specifications

### TV system:

**Front Terminals**  
**4** S Video input – 4 pin DIN  
**4** audio input – phono jack  
**4** audio input – phono jack  
**1** head phones jack

### Colour system:

PAL  
 SECAM, NTSC 3.58, 4.43 (only Video In)

### Channel Coverage:

I: UHF B21-B69

### Picture Tube:

Flat Display FD Trinitron  
 WIDE:  
 • KV-28FQ70U: 28" (approx. 71 cm measured diagonally).  
 • KV-32FQ70U: 32" (approx. 82 cm measured diagonally).

**Sound Output:**  
 2 x 20 W (music power)  
 2 x 10 W (RMS)  
**Woofer:**  
 30 W (music power)  
 15 W (RMS)

### Rear Terminals

**1** 21-pin scart connector (CENELEC standard) including audio / video input, RGB input, TV audio / video output.

**2** 21-pin Scart connector (CENELEC standard) including audio / video input, RGB input, monitor audio / video output.

**3** 21-pin Scart connector (SMARTLINK) (CENELEC standard) including audio / video input, selectable audio / video output and Smartlink interface.

**4** audio outputs (Left/Right) - phono jacks

### Accessories supplied:

1 Remote Control (RM-938)  
 2 Batteries (IEC designated, AA size)

### Other features:

• 100 Hz picture, Digital Plus.  
 • Teletext, Fastext, TOPtext (250 page TEXT memory).  
 • Sleep Timer.

• SmartLink (direct link between your TV set and a compatible VCR. For more information on SmartLink, please refer to the Instruction Manual of your VCR).

• Dolby Virtual.  
 • BBE Digital.  
 • PIP.

• Auto Format.  
 • ACI (Auto Channel Installation).

• Power Consumption:

• KV-28FQ70U: 125 W  
 • KV-32FQ70U: 130 W

### Standby Power Consumption:

0.3 W

### Dimensions (w x h x d) :

• KV-28FQ70U: approx. 789 x 533 x 521 mm.  
 • KV-32FQ70U: approx. 910 x 586 x 586 mm.

### Weight:





• KV-28FQ70U: approx. 46.5 Kg.  
 • KV-32FQ70U: approx. 64 Kg.

Design and specifications are subject to change without notice.


Ecological Paper - Totally Chlorine Free

## Troubleshooting

 Here are some simple solutions to problems which may affect the picture and sound.

Problem	Solution
No picture (screen is dark) and no sound.	<ul style="list-style-type: none"> <li>• Check the aerial connection.</li> <li>• Plug the TV in and press the  button on the front of the TV.</li> <li>• If the standby indicator  is on, press <b>TV I/O</b> button on the remote control.</li> </ul>
Poor or no picture (screen is dark), but good sound.	<ul style="list-style-type: none"> <li>• Using the menu system, select the "Picture Adjustment" menu and select "Reset" to return to the factory settings (see page 9).</li> </ul>
No picture or no menu information from equipment connected to the Scart connector.	<ul style="list-style-type: none"> <li>• Check that the optional equipment is on and press the  button repeatedly on the remote control until the correct input symbol is displayed on the screen (see page 21).</li> </ul>
Good picture, no sound.	<ul style="list-style-type: none"> <li>• Press the  + button on the remote control.</li> <li>• Check that "TV Speakers" is "On" in the "Sound Adjustment" menu (see page 10).</li> <li>• Check that headphones are not connected.</li> </ul>
No colour on colour programmes.	<ul style="list-style-type: none"> <li>• Using the menu system, select the "Picture Adjustment" menu and select "Reset" to return to factory settings (see page 9).</li> </ul>
When you switch on the TV the last channel you were watching before switching the TV off does not appear.	<ul style="list-style-type: none"> <li>• This is not a malfunction. Press the number buttons on the remote control to select the desired channel.</li> </ul>
Distorted picture when changing programmes or selecting teletext.	<ul style="list-style-type: none"> <li>• Turn off any equipment connected to the Scart connector on the rear of the TV.</li> </ul>
Wrong characters appear when viewing NexTVview.	<ul style="list-style-type: none"> <li>• Use the menu system to enter the "Language" menu (see page 13) and select the same language that NexTVview is broadcast in.</li> </ul>

continued...

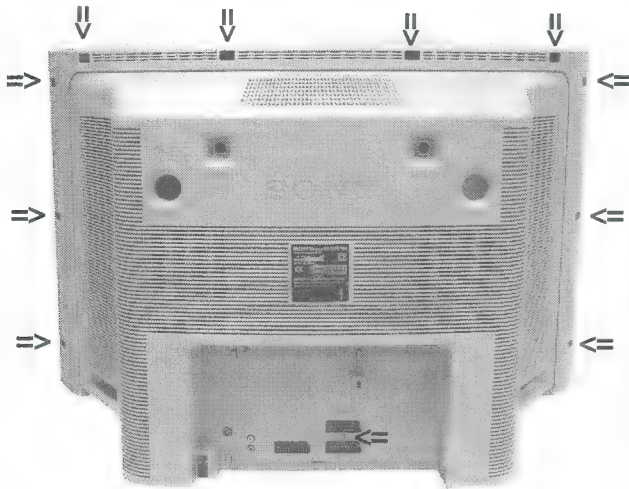
Problem	Solution
Picture slanted	<ul style="list-style-type: none"> <li>• Using the menu system, select the "Picture Rotation" option in the "Detail Set Up" menu to correct the picture slant (see page 16).</li> </ul>
Noisy picture when viewing a TV channel.	<ul style="list-style-type: none"> <li>• Using the menu system, select the "Manual Programme Preset" menu and adjust Fine Tuning (AFT) to obtain better picture reception (see page 15).</li> <li>• Using the menu system, select the "Noise Reduction" option in the "Picture Adjustment" menu and select "Auto" to reduce the noise in the picture (see page 19).</li> </ul>
Remote control does not function.	<ul style="list-style-type: none"> <li>• Check that the Media Selector on the remote control is set to the device you are using (VCR, TV or DVD).</li> <li>• If the remote control does not operate the VCR or DVD even when the Media Selector has been set correctly. Enter the necessary code set as explained in the "Remote Control Configuration for VCR/DVD" chapter of this instruction manual (see page 22).</li> <li>• Replace the batteries.</li> </ul>
The standby indicator  on the TV flashes.	<ul style="list-style-type: none"> <li>• Contact your nearest Sony service centre.</li> </ul>

 If you continue to experience problems, have your TV serviced by qualified personnel. Never open the casing yourself.



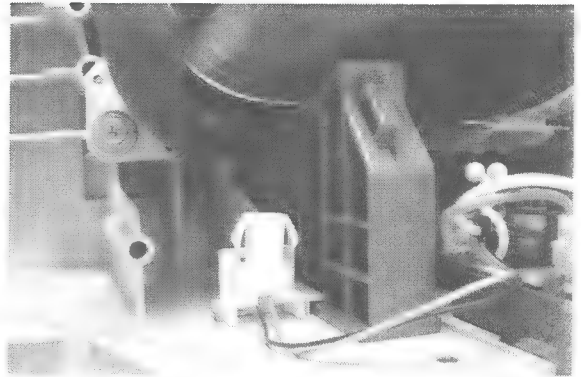
## SECTION 2 DISASSEMBLY

### 2-1. Rear Cover Removal



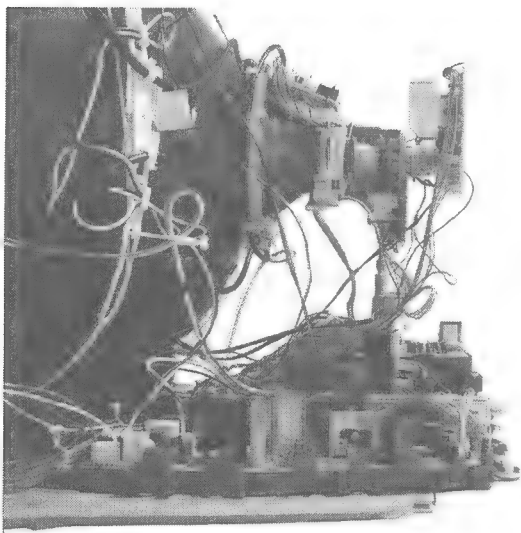
Remove the rear cover fixing screws indicated and pull the rear cover backwards away from the set.

### 2-2. Speaker Connector Disconnection

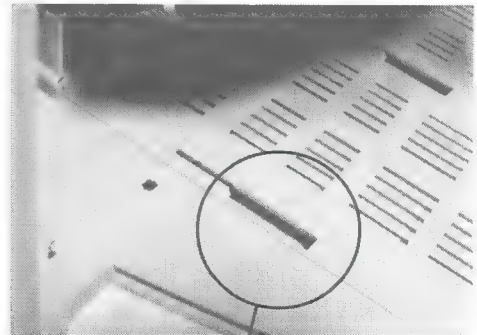


Before completely removing the rear cover disconnect the speaker connector which is located on the inside of the set.

### 2-3. Chassis Removal and Refitting

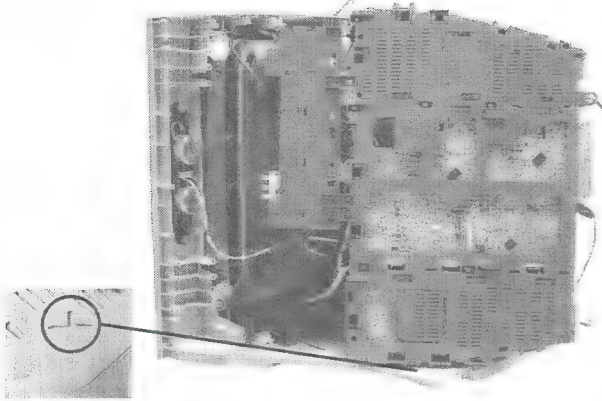


To remove lift the main bracket rear slightly and slide the chassis away from the beznet. Ensure that the interconnecting leads are released from their purse locks to prevent damage being caused.



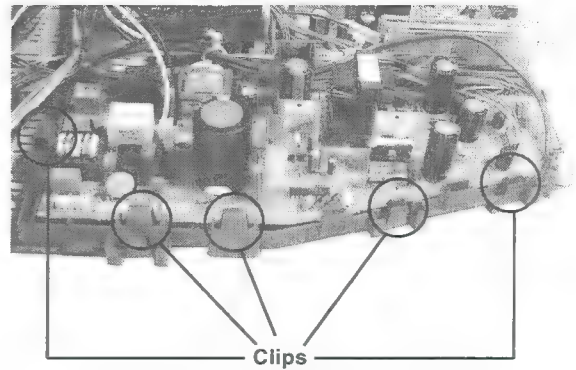
When refitting the chassis ensure that the main bracket is located in the beznet guide slots before sliding the chassis forwards. Refit the inter-connecting leads in their respective purse locks.

#### 2-4. Service Position



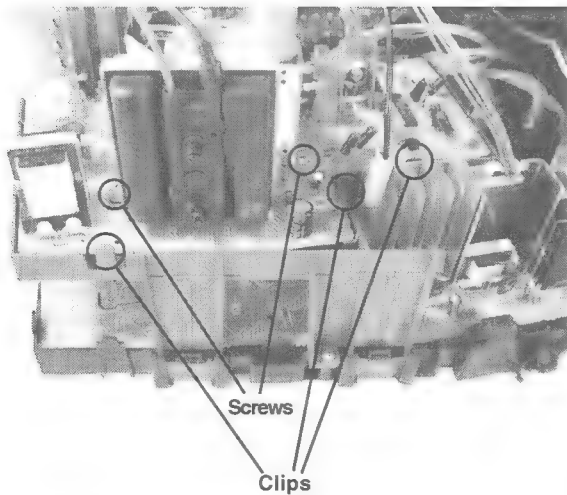
To place the chassis in the service position, insert the main bracket firmly into the T-slot located on the left corner of the bezel as indicated (see inset). To gain access to the underside of the boards follow the instructions on page 17. [Removal and Replacement of the main bracket bottom plates].

#### 2-5. G Board Removal



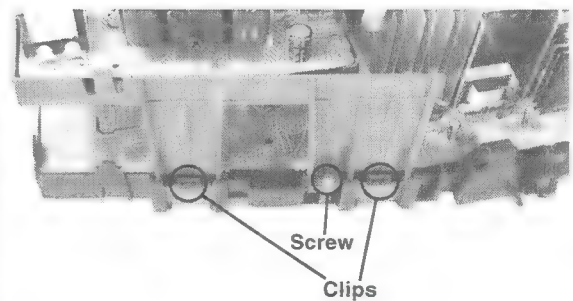
To remove the G Board release the clips circled and ease the board gently away from the support bracket.

#### 2-6. D2 Board Removal



To remove the D2 board remove the two screws circled, release the clips circled and ease the board gently away from the support bracket.

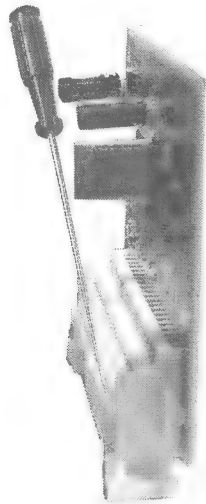
#### 2-7. D Board Removal



To remove the D board first remove the D2 bracket by removing the two screws (one on each side of the bracket) and releasing the four clips (two on each side of the bracket). The D board can then be removed using the same method as the G board.

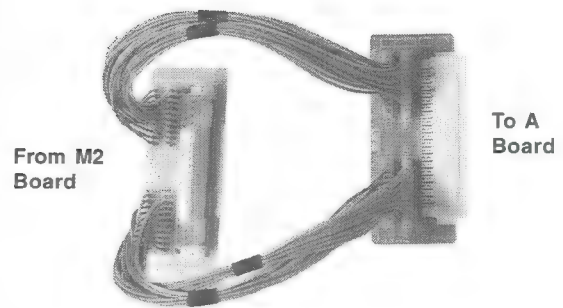


## 2-8. M2 Board Removal



To remove the M2 Board gently release the two clips with a screwdriver and remove the board from its socket vertically.

## 2-9. Service Connector for M2 Board

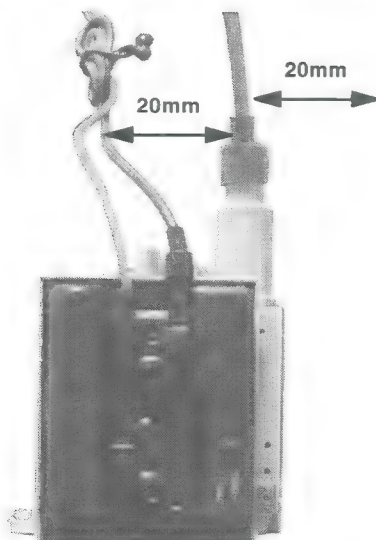


Extender Board Assembly A-1642-293-A

If the M2 Board needs to be removed for testing when the chassis is placed in its service position, it would be necessary to use an extender board and extension cable as indicated above.

The Extender board and extension cable are available as a service part by ordering the part number as indicated.

## 2-10. Wire Dressing

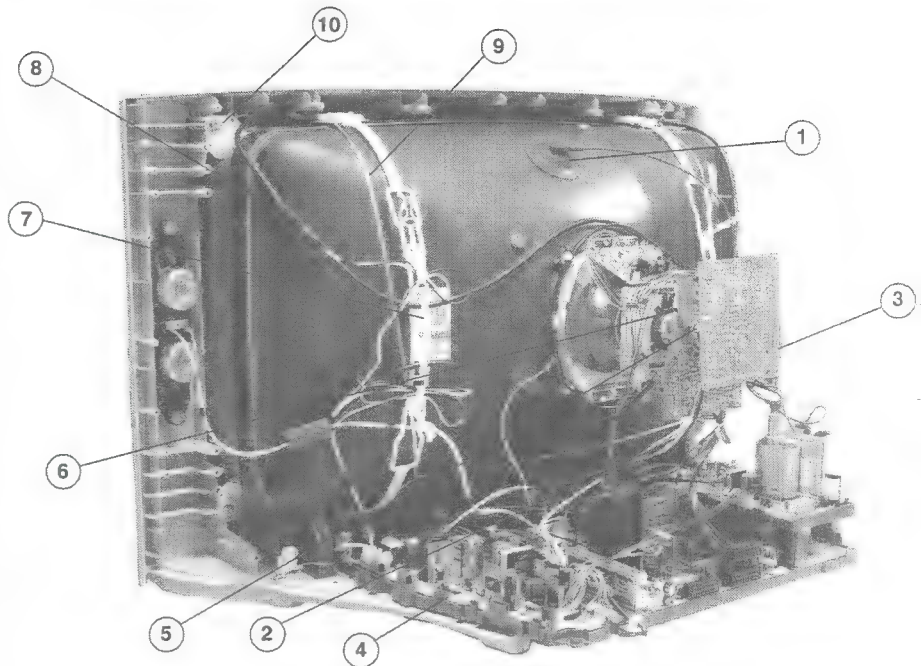
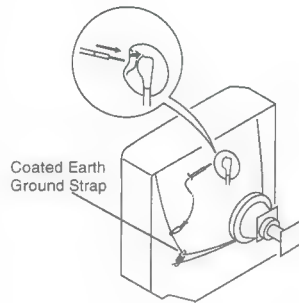


Ensure that wires do not touch heatsinks and high temperature hotspots. All wires must be kept at a minimum distance of 20mm away from the EHT lead

## 2-11. Picture Tube Removal

### WARNING: BEFORE REMOVING THE ANODE CAP

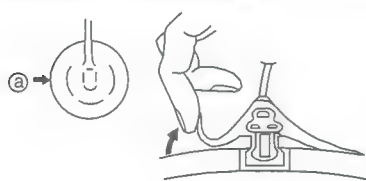
High voltage remains in the CRT even after the power is disconnected. To avoid electric shock, discharge CRT **before** attempting to remove the anode cap. Short between anode and CRT coated earth ground strap.



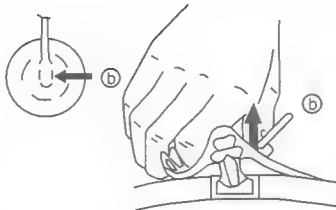
1. Discharge the anode of the CRT and remove the anode cap.
2. Unplug all interconnecting leads from the Deflection yoke, neck assy, degaussing coils and CRT grounding strap.
3. Remove the C Board from the CRT.
4. Remove the chassis assembly.
5. Loosen the Neck assembly fixing screw and remove.
6. Loosen the Deflection yoke fixing screw and remove.
7. Place the set with the CRT face down on a cushion and remove the Degaussing Coil holders.
8. Remove the Degaussing Coils.
9. Remove the CRT grounding strap and spring tensioners.
10. Unscrew the four CRT fixing screws [ located on each CRT corner ] and remove the CRT.  
[Take care not to handle the CRT by the neck.]

### Removal of the Anode-Cap

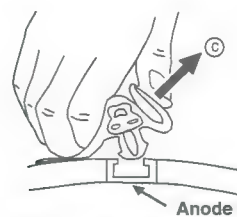
#### REMOVAL PROCEDURE.



- ① Turn up one side of the rubber cap in the direction indicated by the arrow (a)



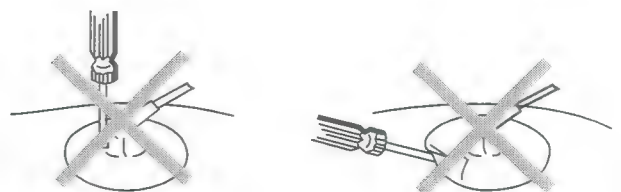
- ② Using a thumb pull up the rubber cap firmly in the direction indicated by the arrow (b)



- ③ When one side of the rubber cap is separated from the anode button, the anode-cap can be removed by turning up the rubber cap and pulling it up in the direction of the arrow (c)

#### How to handle the Anode-Cap

1. To prevent damaging the surface of the anode-cap do not use sharp materials.
2. Do not apply too great a pressure on the rubber, as this may cause damage to the anode connector.
3. A metal fitting called a shatter hook terminal is fitted inside the rubber cap.
4. Do not turn the rubber foot over excessively, this may cause damage if the shatter hook sticks out.



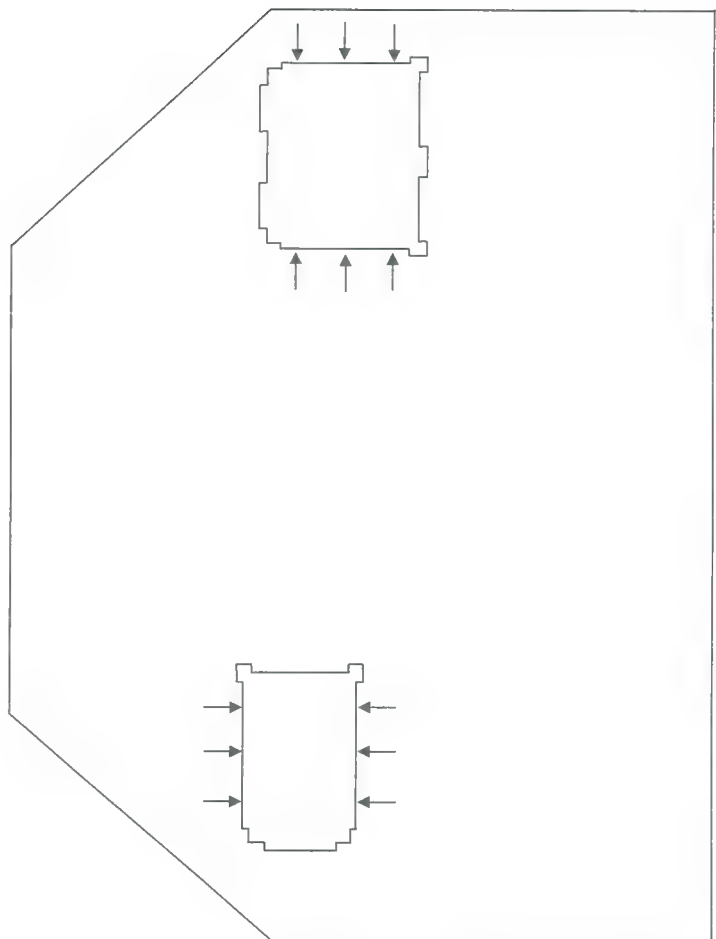


## REMOVAL AND REPLACEMENT OF THE MAIN-BRACKET BOTTOM PLATES

### (1) REMOVING THE PLATES

In the event of servicing being required to the solder side of the printed wiring boards, the bottom plates fitted to the main chassis bracket require to be removed. This is performed by cutting the gates with a sharp wire cutter at the locations indicated by the arrows.

**Note :** There are 2 plates fitted to the main bracket. Only remove the necessary plate to gain access to the printed wiring board.

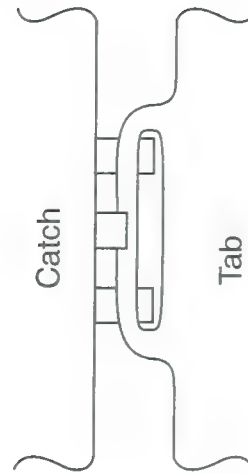


 For safety reasons, on no account should the plates be removed and not refitted after servicing.

### (2) REFITTING THE PLATES

Because the plates differ in size it is important that the correct plates are refitted in their original location.

Please note that the plates need to be rotated 180 degrees from their cut position to allow the tabs to be fitted into their catch positions.



## SECTION 3 SET-UP ADJUSTMENTS

- When complete readjustment is necessary or a new picture tube is installed, carry out the following adjustments.
- Unless there are specific instructions to the contrary, carry out these adjustments with the rated power supply.
- Unless there are specific instructions to the contrary, set the controls and switches to the following settings :

Contrast ..... normal

Brightness ..... normal

**Carry out the adjustments in the following order :**

- 3-1. Beam Landing.
- 3-2. Convergence.
- 3-3. Focus.
- 3-4. White Balance.

**Note :** Test equipment required.

1. Color bar/pattern generator.
2. Degausser.
3. Oscilloscope.
4. Digital multimeter.

### 3-1. Beam Landing

#### Preparation :

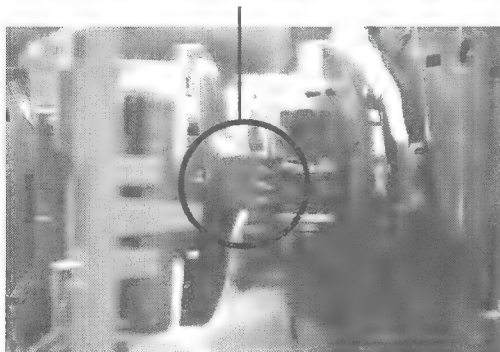
1. In order to reduce the influence of geomagnetism on the set's picture tube, face it in an easterly or westerly direction.
2. Switch on the TV set's power and degauss with a degausser.

#### (1) Adjustment of Correction Magnet for Y-Splitting Axis.

1. Input a crosshatch signal from the pattern generator.
2. Set the Picture control to minimum and confirm that the Brightness control is set to normal.
3. Position the neck assembly as indicated in Fig.3-2.
4. Loosen the deflection yoke fixing screw.
5. Move the deflection yoke as far forward as is possible.
6. Adjust the upper and lower pin symmetrically by opening or closing the Y-splitting axis correction magnets located on the neck assembly. [See Fig 3-3]
7. Return the deflection yoke to its original position and re-tighten its fixing screw.

Fig.3-1

Y-splitting axis correction magnet



#### Caution :

High voltages are present on the Deflection yoke terminals - take care when handling the Deflection yoke whilst carrying out adjustments.

#### (2) Landing

**Note :** Before carrying out the following adjustments adjust the magnets as indicated [See Fig.3-4].

1. Input a crosshatch signal from the signal generator.
2. Rough-adjust the focus and horizontal convergence.
3. Switch from the crosshatch pattern to an all-red pattern.
4. Move the deflection yoke backwards and adjust with the purity magnet so that the red is at the centre and it aligns symmetrically [See Fig.3-5].
5. Move the deflection yoke forward to the point where the entire screen just becomes red [Mark its position].
6. Move the deflection yoke further forward until the screen just changes colour at the edges. [Mark its position]
7. Position the deflection yoke between the two marks indicated above.
8. Input a crosshatch pattern from the pattern generator and rotate the deflection yoke so that the horizontal lines are parallel with the top and bottom of the screen.
9. When the position of the deflection yoke has been determined, fasten it with its fixing screw.
10. Switch the pattern generator to green then blue and confirm the purity.
11. If the beam does not land correctly in all the corners of the screen, use disk magnets to correct it. [Confirm the corner landing for green and blue]

Fig.3-2

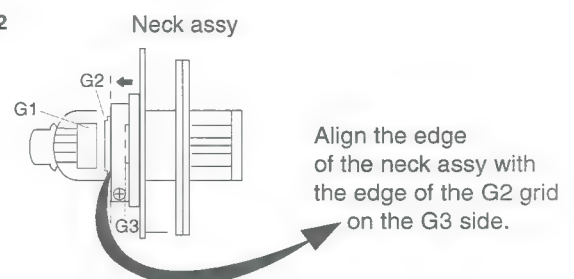
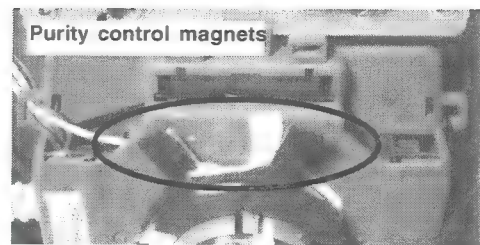
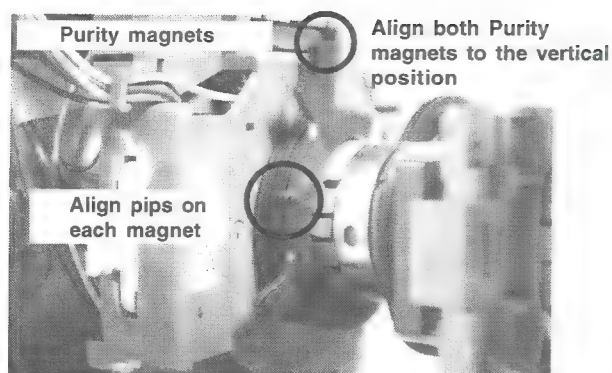


Fig.3-3



Fig.3-4



### 3-2. Convergence

#### (1) Screen centre convergence [Static convergence]

1. Input a dot pattern signal from the pattern generator.
2. Normalize the picture setting.
3. [Moving vertically], adjust the V.STAT magnet so that the vertical red, green and blue dots coincide at the centre of the screen.

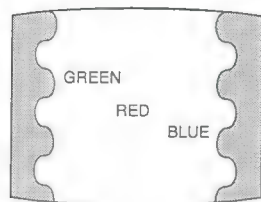
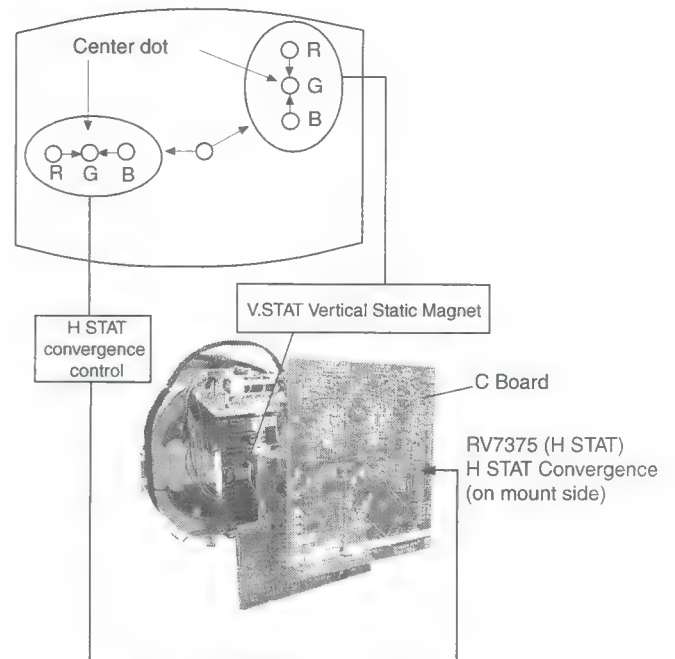
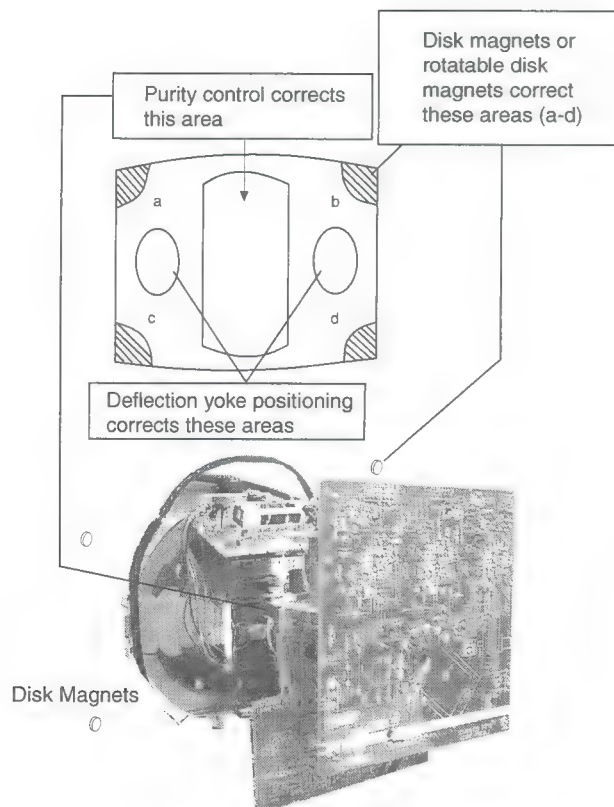
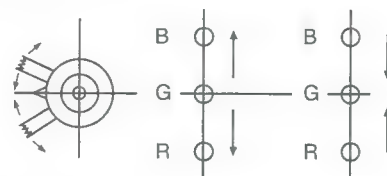


Fig.3-5



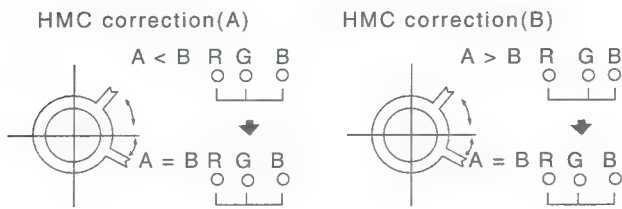
By opening or closing the V.STAT magnet, the red green and blue dots move in the direction indicated below.



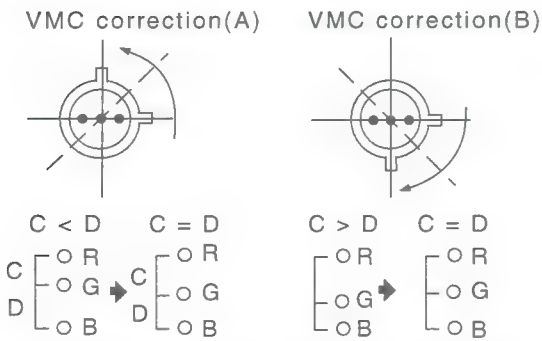
**Note:** Do not adjust the H.STAT by rotating the V.STAT magnets as this can affect the focus setting.

4. Correction for HMC [Horizontal mis-convergence] and VMC [Vertical mis-convergence] by using the BMC [Hexapole] magnet.

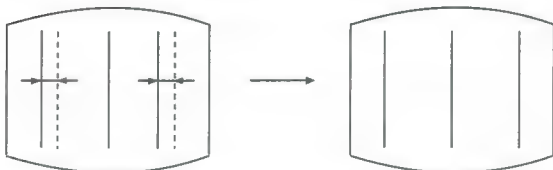
- a). HMC correction by BMC [Hexapole] magnet and movement of the electron beam.



- b). VMC correction by BMC [Hexapole] magnet and movement of the electron beam.

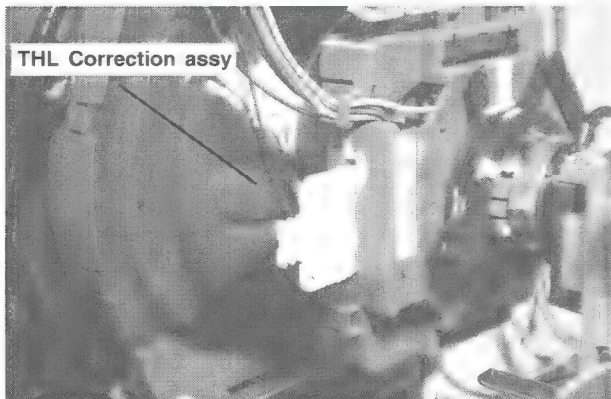


#### HAMP Adjustment

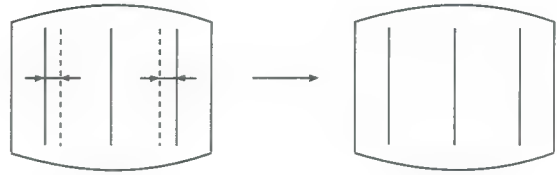


Adjust the HAMP using HAMPL and HAMPR registers in the Dynamic Convergence section of the service menu.

#### HTIL Adjustment



HTIL correction can be performed by adding a THL correction assembly to the Deflection yoke.



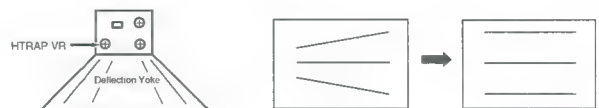
#### YCH Adjustment



#### TLV Adjustment

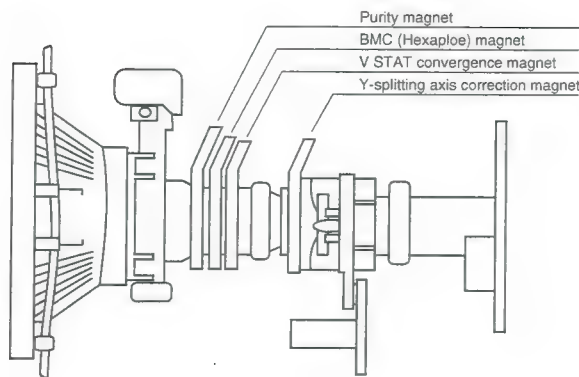


#### H-TRAP Adjustment

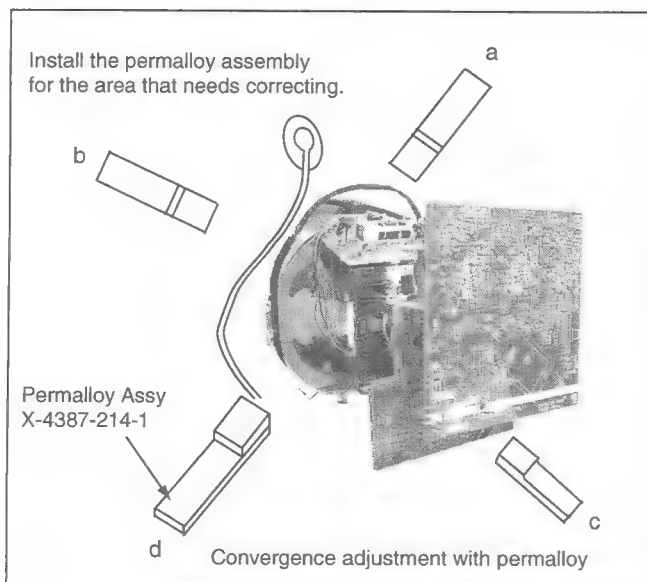
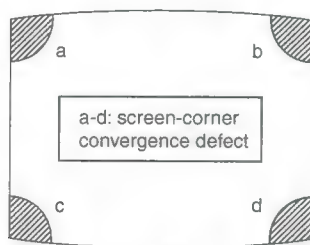


The H-TRAP should not be adjusted unless absolutely necessary as it affects the TLV settings.

## Layout of each control

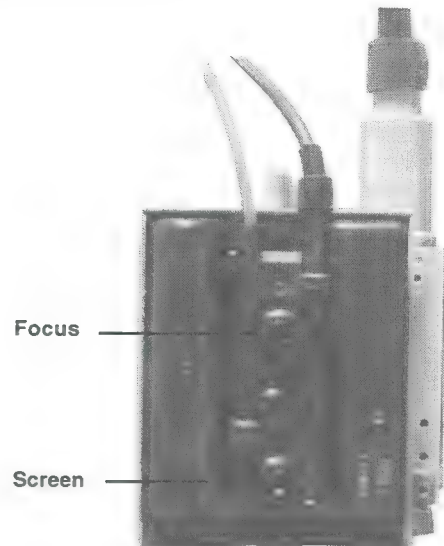


**Note :** If you are unable to adjust the corner convergence properly, this can be corrected with the use of permalloy magnets.



## 3-3. Focus Adjustment

1. Receive a television broadcast signal.
2. Normalize the picture setting.
3. Adjust the focus control located on the flyback transformer to obtain the best focus at the centre of the screen.  
Bring only the centre area of the screen into focus, the magenta-tinging appears on the screen. In this case, adjust the focus to optimize the screen uniformly.



## 3-4. Screen (G2), White Balance

[Adjustment in the service mode using the remote commander]

### G2 adjustment

1. Input a dot signal from the pattern generator.
2. Set the Picture, Brightness and Colour to minimum.
3. Apply 165V DC from an external power supply to the R, G and B cathodes of the CRT.
4. Whilst watching the picture, adjust the G2 control [SCREEN] located on the flyback transformer to the point just before the flyback return lines disappear.

### White balance adjustment for TV mode

1. Input an all-white signal from the pattern generator.
2. Program the Remote Commander for operation in Service Mode. [ See Page 22 ].
3. Enter into the 'Service Mode' by pressing 'VIDEO' button twice and 'MENU' on the Service Commander.
4. Select 'Service' from the on screen menu display and press 'Right Arrow'.
5. The 'Service' menu will appear on the screen.[See Page 23]
6. Set the 'Contrast' to MAX.
7. Set the 'R-Drive' to 50.
8. Adjust the 'G-Drive' and the 'B-Drive' so that the white balance becomes optimum.
9. Press the 'OK' button to write the data for each item.
10. Set the 'Contrast' to MIN.
11. Set the 'R-Cutoff' to 29.
12. Adjust the 'G-Cutoff', and the 'B-Cutoff' with the left and right buttons on the remote commander so that the white balance becomes optimum.
13. Press the 'OK' button to write the data for each item.



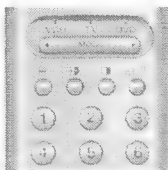
## SECTION 4 CIRCUIT ADJUSTMENTS

### 4-1. Electrical Adjustments


Service adjustments to this model can be performed using the supplied remote Commander RM-938.

#### Programming the Remote Commander for Operation in Service Mode

1. Press the VCR/TV/DVD button until the TV LED lights.
2. Press and hold the yellow button for approx. 5 seconds until the TV LED flashes quickly.
3. Press 99999. All three LED's should light.  
The remote commander is now set to Service Mode.
4. To return the remote commander to normal operation mode repeat steps 1. and 2. then press 00000. All three LED's should light.  
The remote commander is now set to normal mode.



#### Setting the TV into Service Mode

1. Program the remote commander for operation in Service Mode as described above.
2. Turn on the TV main power switch.
3. Press the video standby button  on the remote commander twice.  
'TT \_\_' will appear in the upper right corner of the screen.  
Other status information will also be displayed.
4. Press 'MENU' on the remote commander to obtain the following menu on the screen.

Geometry  
Panorama  
Service  
Scanrate  
DAC  
**PiP**  
Sound  
IF adjust  
Error Menu

AE6B Wide v2.21 (Jan 2002)  
Factory data 02h 16h  
MSP Device : MSP3411G

5. Move to the corresponding adjustment item using the up or down arrow buttons on the Remote Commander.
6. Press the right arrow button to enter into the required menu item.
7. Press the 'Menu' button on the Remote Commander to quit the Service Mode when all adjustments have been completed.

#### Note :

- After carrying out the service adjustments, to prevent the customer accessing the 'Service Menu' switch the TV set OFF and then ON.

#### GEOMETRY

ABL TH	(0, 3)	0
ABL MODE	(0, 3)	0
P ABL	(0, 15)	15
V SIZE	(0, 63)	35
V POSITION	(0, 63)	33
V COMP	(0, 3)	1
V LIN	(0, 15)	7
S CORRECTION	(0, 15)	7
H SIZE	(0, 63)	44
PIN AMP	(0, 63)	32
UP CORNERPIN	(0, 63)	29
M PIN	(0, 3)	2
LO CORNERPIN	(0, 63)	29
TRAPEZIUM	(0, 15)	2
H POSITION	(0, 63)	40
AFC BOW	(0, 15)	8
AFC ANGLE	(0, 15)	9
LEFT BLK	(0, 63)	34
RIGHT BLK	(0, 63)	17
V ASPECT	(0, 63)	47
AKBTIM1	(0, 3)	2
AKBTIM2	(0, 1)	0
IKR		1
HNG		0
VNG		0

#### PANORAMA

HORWIDTH H	(0, 7)	1
HORWIDTH L	(0, 255)	170
HORPOS H	(0, 7)	0
HORPOS L	(0, 255)	15
NAPPLIP H	(0, 7)	1
NAPPLIP L	(0, 127)	62
HSCPOSC H	(0, 15)	8
HSCPOSC L	(0, 255)	151
BLANDEL	(0, 255)	13
BLANLEN	(0, 255)	207
BLANPOL	(0, 1)	0
HSEG1 H	(0, 7)	0
HSEG1 L	(0, 255)	96
HSEG2 H	(0, 7)	0
HSEG2 L	(0, 255)	192
HSEG3 H	(0, 7)	0
HSEG3 L	(0, 255)	224
HSEG4 H	(0, 7)	1
HSEG4 L	(0, 255)	64
HINCO H	(0, 1)	0
HINCO L	(0, 255)	40
HINC1 H	(0, 1)	0
HINC1 L	(0, 255)	20
HINC2 H	(0, 1)	0
HINC2 L	(0, 255)	0
HINC3 H	(0, 1)	1
HINC3 L	(0, 255)	236
HINC4 H	(0, 1)	1
HINC4 L	(0, 255)	216

### IF ADJUST

Automute	1
Audio Gain	0
L Gating	0

### SERVICE

SUB COL	(0, 63)	Adj
SUB HUE	(0, 63)	31
SUB SHARP	(0, 63)	30
SUB BRIGHT	(0, 63)	13
SUB CONT	(0, 15)	12
R-DRIVE	(0, 63)	50
G-DRIVE	(0, 63)	Adj
B-DRIVE	(0, 63)	Adj
R CUTOFF	(0, 63)	28
G CUTOFF	(0, 63)	24
B CUTOFF	(0, 63)	46
Br TXT	(0, 15)	7
Br OSD	(0, 15)	10

### DAC

CONFIG	00000000	
MPIN CONT	(0, 255)	96
HLIN	(0, 255)	83
HTRAP	(0, 255)	127
ROT. COIL	(0, 255)	130
PHOCUS PH	(0, 255)	90

### SOUND

M-N	(0, 511)	200
M-D	(-128, -1)	-20
M-S	(+0, +127)	+20
S-M	(+0, +127)	+10
D-M	(-128, -1)	-10
N-M	(0, 1023)	496
BBE	(+0, +68)	+28
B1	(-96, +96)	+0
B2	(-96, +96)	+0
B3	(-96, +96)	+0
B4	(-96, +96)	+0
B5	(-96, +96)	+0
SW L	(-128, +0)	+0
SW F	(+5, +40)	+30
NICAM C AD	10001	
NICAM Error	(0, 2047)	0
Stereo	(-128, +127)	+0

Status 0000000110

### ERROR MENU

E02	OCP	(0, 255)	0
E03	OVP	(0, 255)	0
E04	VSYNC	(0, 255)	0
E05	IKR	(0, 255)	0
E06	IIC	(0, 255)	0
E07	NVM	(0, 255)	0
E08	HROT	(0, 255)	0
E09	TUNER	(0, 255)	0
E10	SOUNDP	(0, 255)	0
E11	-	(0, 255)	0
E12	SCANRATE	(0, 255)	0
E13	DAC	(0, 255)	0
E14	BACKEND	(0, 255)	0
E15	DYN CON	(0, 255)	0
E16	PIP	(0, 255)	0

### WORKING TIME

HOURS	14
MINUTES	7

### Sub Brightness Adjustment

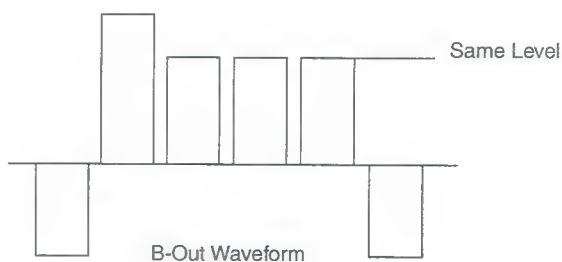
1. Input a Monoscope pattern.
2. Program the Remote Commander for operation in Service Mode. [ See Page 22 ].
3. Press 'VIDEO' 'VIDEO' 13 on the Remote Commander.
4. Adjust the 'Sub-Brightness' data so that there is barely a difference between the 0 IRE and 10 IRE signal levels.

### Sub Contrast Adjustment

1. Input a video signal that contains a small 100% white area on a black background.
2. Connect an digital voltmeter to Pin 10 of J7376 [C Board].
3. Program the Remote Commander for operation in Service Mode. [ See Page 22 ].
4. Adjust the Sub-Contrast [ Using 'VIDEO' 'VIDEO' '11' ] to obtain a voltage of 105 +/- 5V.

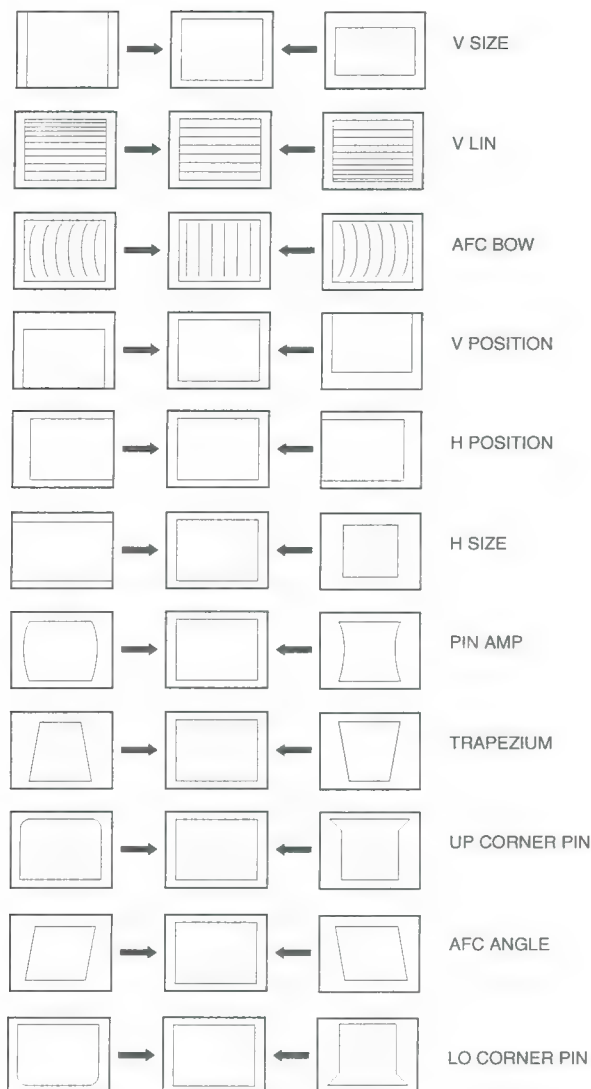
### Sub Colour Adjustment

1. Receive a PAL colour bar signal.
2. Connect an oscilloscope to Pin 6 of CN7001 [A Board].
3. Program the Remote Commander for operation in Service Mode. [ See Page 22 ].
4. Adjust the 'Sub Colour' [ Using 'VIDEO' 'VIDEO' '12' ] so that the Cyan, Magenta and Blue colour bars are of equal levels as indicated below.



## Deflection System Adjustment

1. Program the Remote Commander for operation in Service Mode. [ See Page 22 ] and enter into the 'Geometry' service menu.
2. Select and adjust each item in order to obtain the optimum image.



### GEOMETRY

ABL TH	(0, 3)	0
ABL MODE	(0, 3)	0
P ABL	(0, 15)	15
V SIZE	(0, 63)	35
V POSITION	(0, 63)	33
V COMP	(0, 3)	1
V LIN	(0, 15)	7
S CORRECTION	(0, 15)	7
H SIZE	(0, 63)	44
PIN AMP	(0, 63)	32
UP CORNERPIN	(0, 63)	29
M PIN	(0, 3)	2
LO CORNERPIN	(0, 63)	29
TRAPEZIUM	(0, 15)	2
H POSITION	(0, 63)	40
AFC BOW	(0, 15)	8
AFC ANGLE	(0, 15)	9
LEFT BLK	(0, 63)	34
RIGHT BLK	(0, 63)	17
V ASPECT	(0, 63)	47
AKBTIM1	(0, 3)	2
AKBTIM2	(0, 1)	0
IKR		1
HNG		0
VNG		0

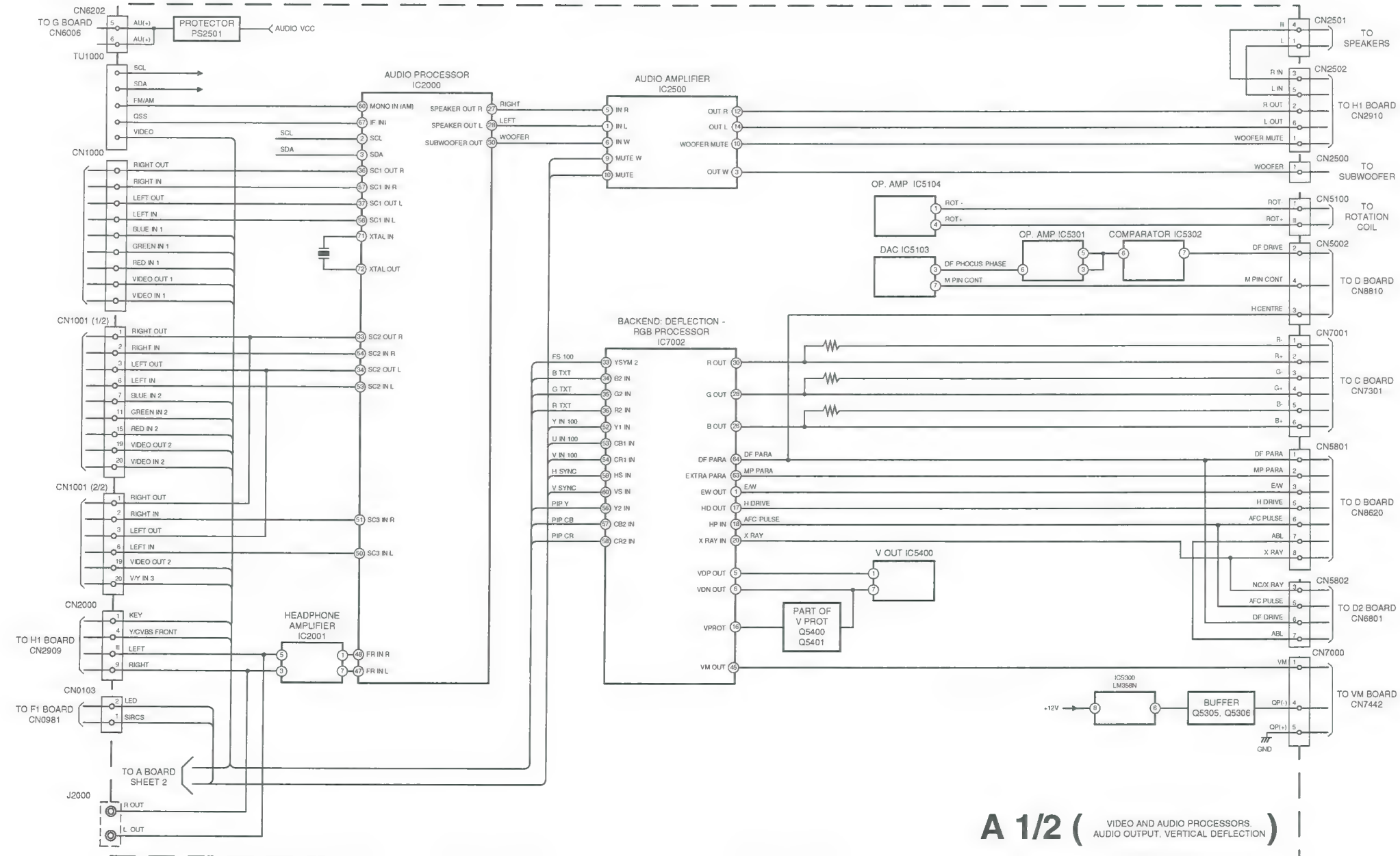
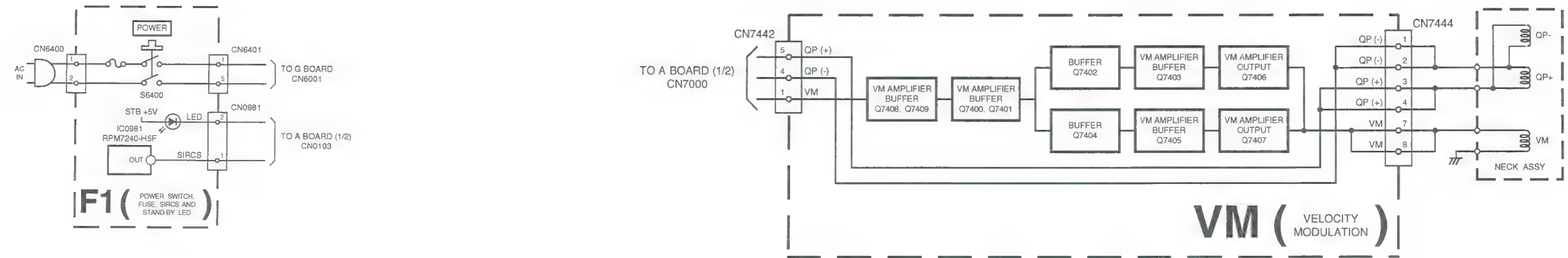
## 4-2. TEST MODE 2:

Test Mode 2 is available by programming the Remote Commander for operation in Service Mode [ As shown on Page 22 ] then pressing the 'VIDEO' button twice. OSD 'TT' appears. The functions described below are available by selecting the two numbers. To release the 'Test mode 2', press 00, 10, 20 ... or switch the TV set into Stand-by mode.

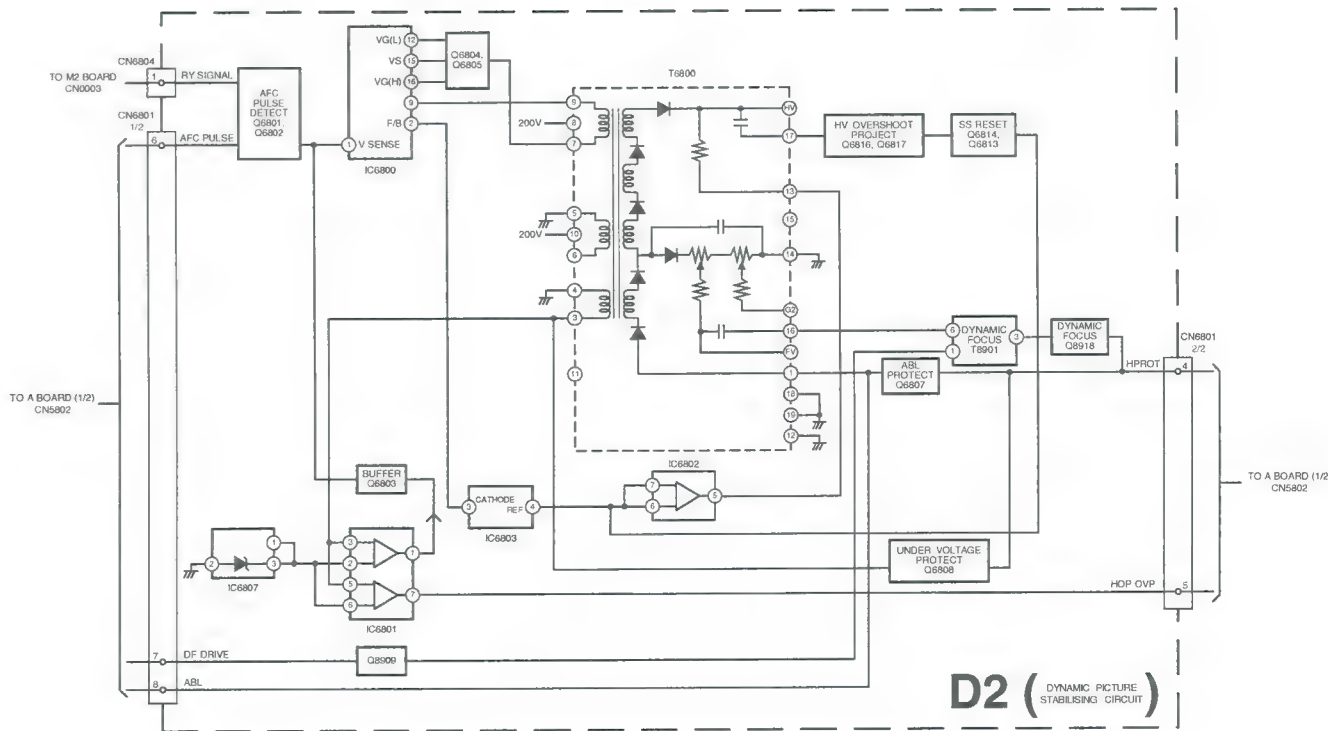
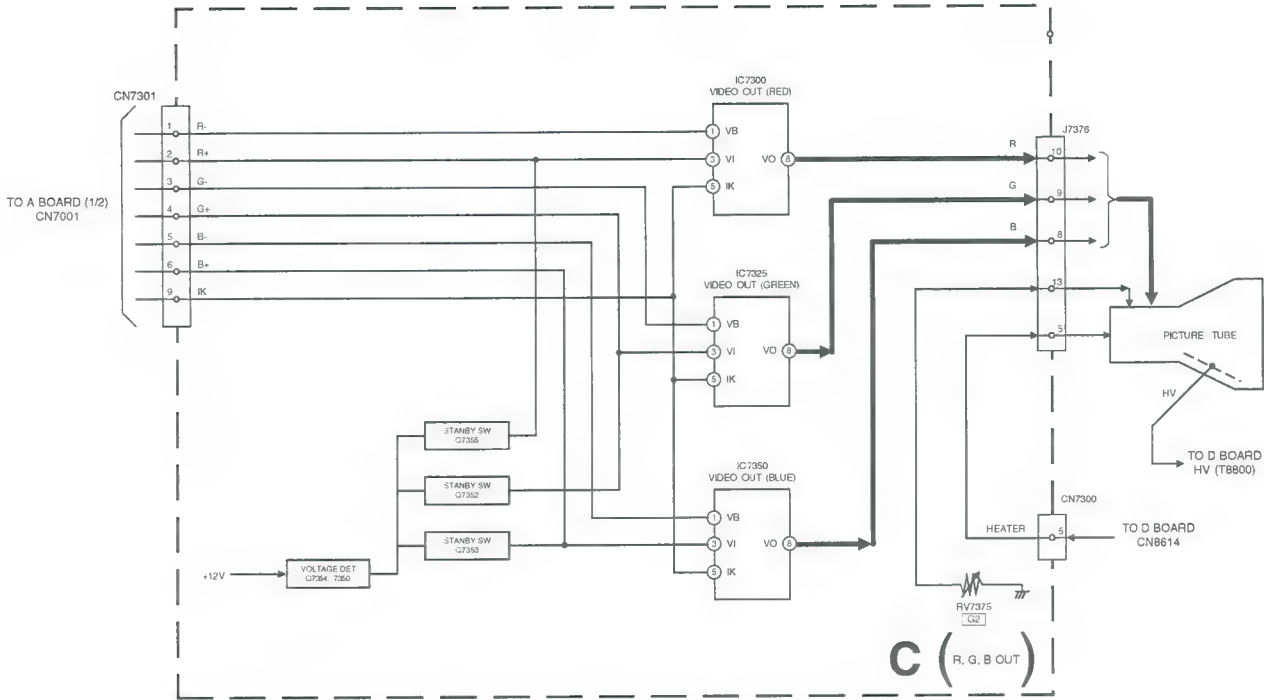
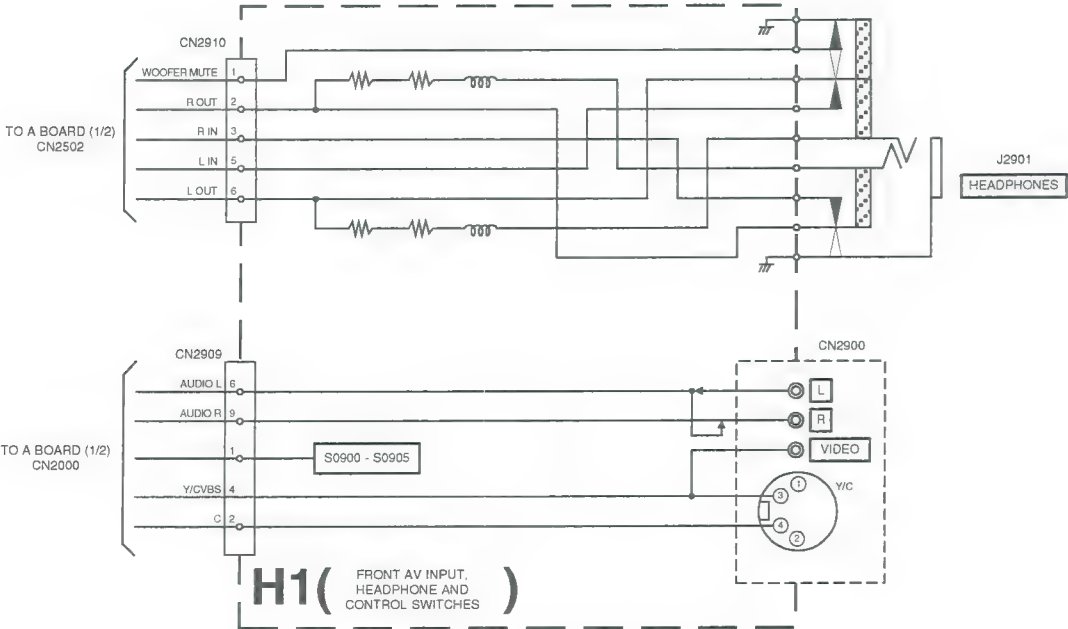
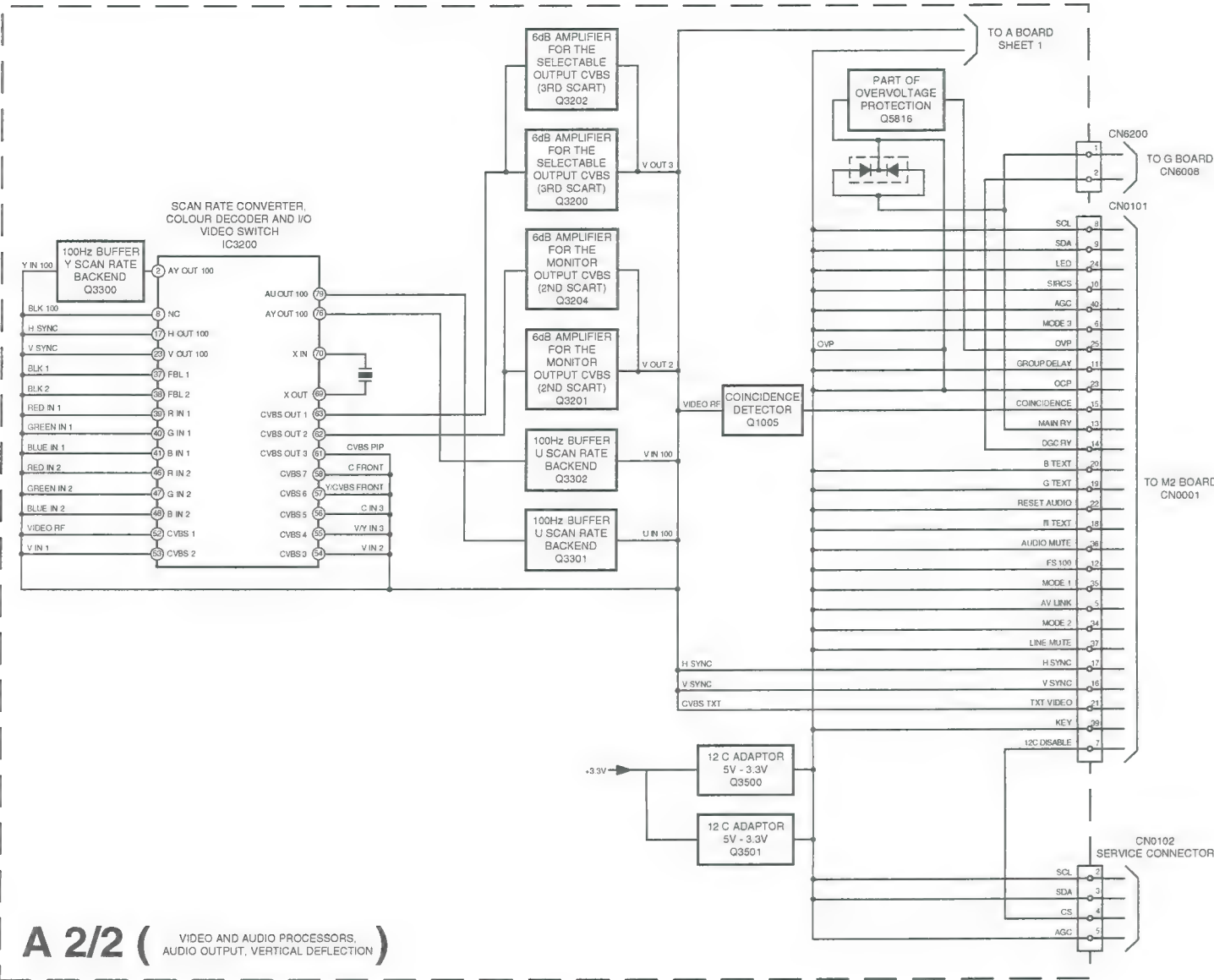
00	'TT' mode off
01	Picture maximum
02	Picture minimum
03	Set speaker/headphone Volume to 35%
04	Set speaker/headphone Volume to 50%
05	Set speaker/headphone Volume to 65%
06	Set speaker/headphone Volume to 80%
07	Ageing mode
08	Shipping Condition
11	Sub picture adjustment
12	Sub colour adjustment
13	Sub Brightness adjustment
14	Text H Position adjustment
15	Rotation Coil Test
16	Picture level 50%
19	Factory Mode Enable/Disable
21	Destination ADEKR
22	Destination BL
23	Destination ADEKR
24	Destination U
25	Destination ADEKR
26	Destination BL
27	Destination ADEKR
28	Destination ADEKR
31	Auto Shutoff Enable/Disable
36	Velocity Modulation (VM) OFF/ON test
41	Re-initialise NVM
43	Select Dual A sound
44	Select Dual B sound
45	Select Mono sound
46	Select Stereo sound
48	Set NVM as non virgin
49	Set NVM as virgin
53	FM Overmodulation Enable/Disable
55	Tuner selection (SONY/ALPS)
59	Select Model 3 Scarts + PIP or 2 Scarts
68	Enable/Disable X26 countermeasure (N problem)
73	Enable Zweiton D/K2 system (6.5/6.74)
74	Enable Zweiton D/K3 system (6.5/5.74)
78	Balance full right
79	Balance full left
87	Local keys test
99	Display Error and Working Time menu



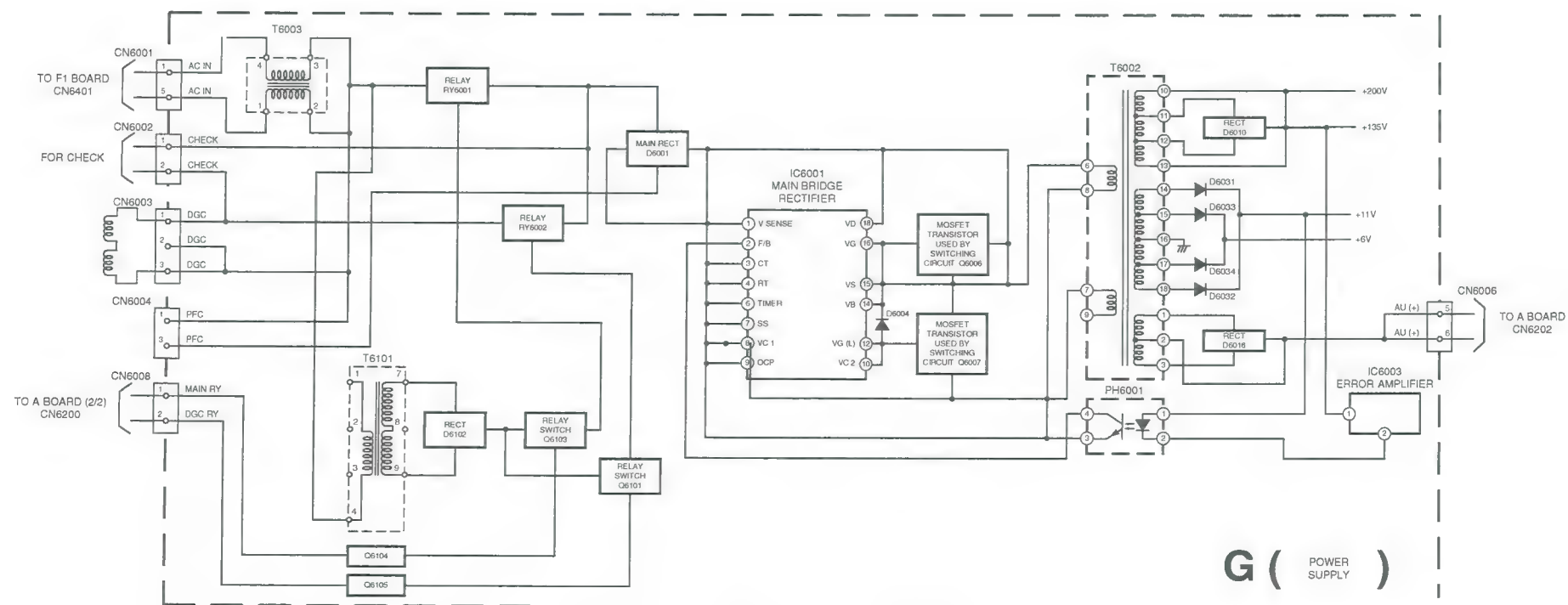
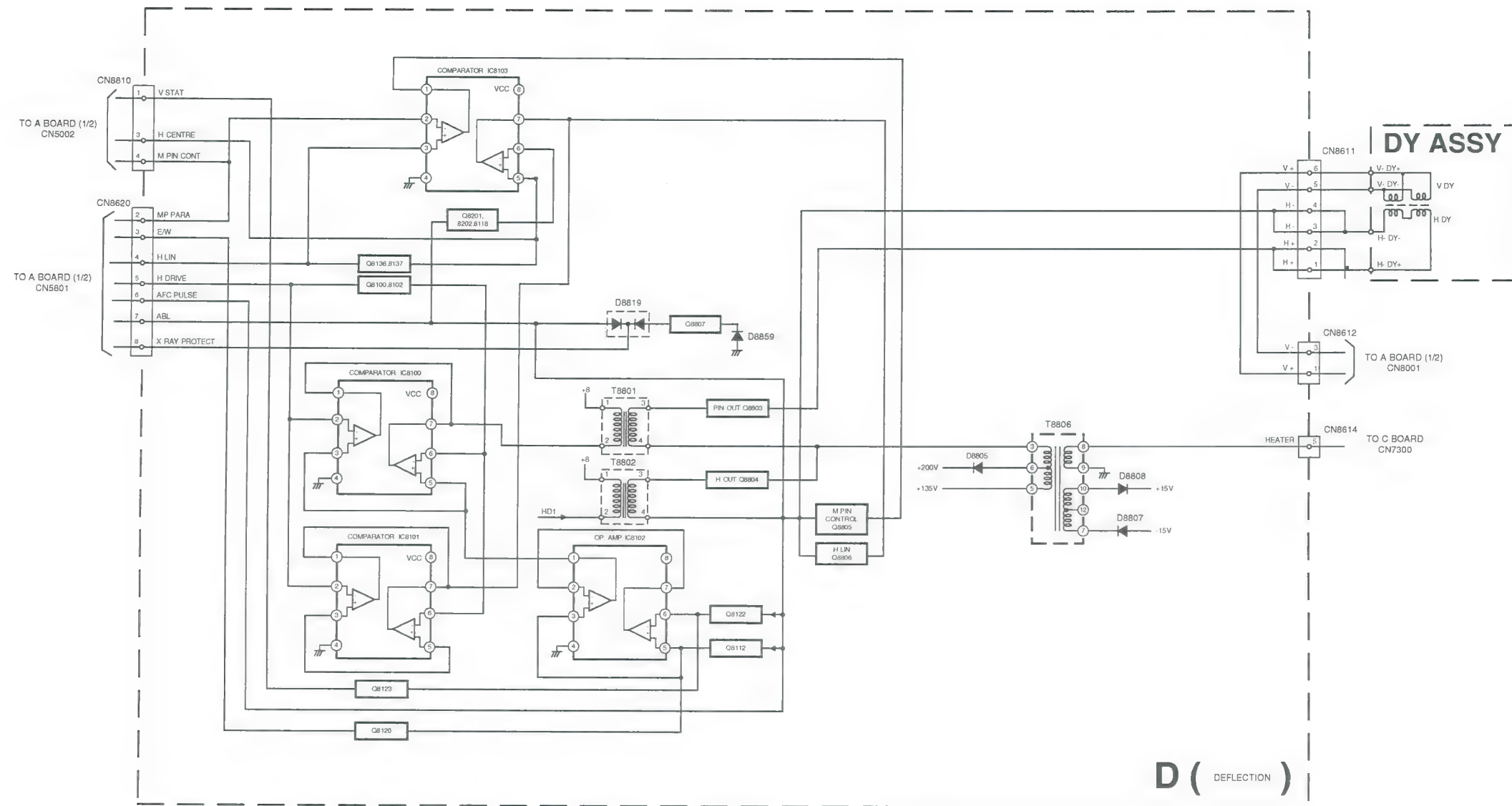
## 5-1. BLOCK DIAGRAMS (1)



5-1. BLOCK DIAGRAMS (2)

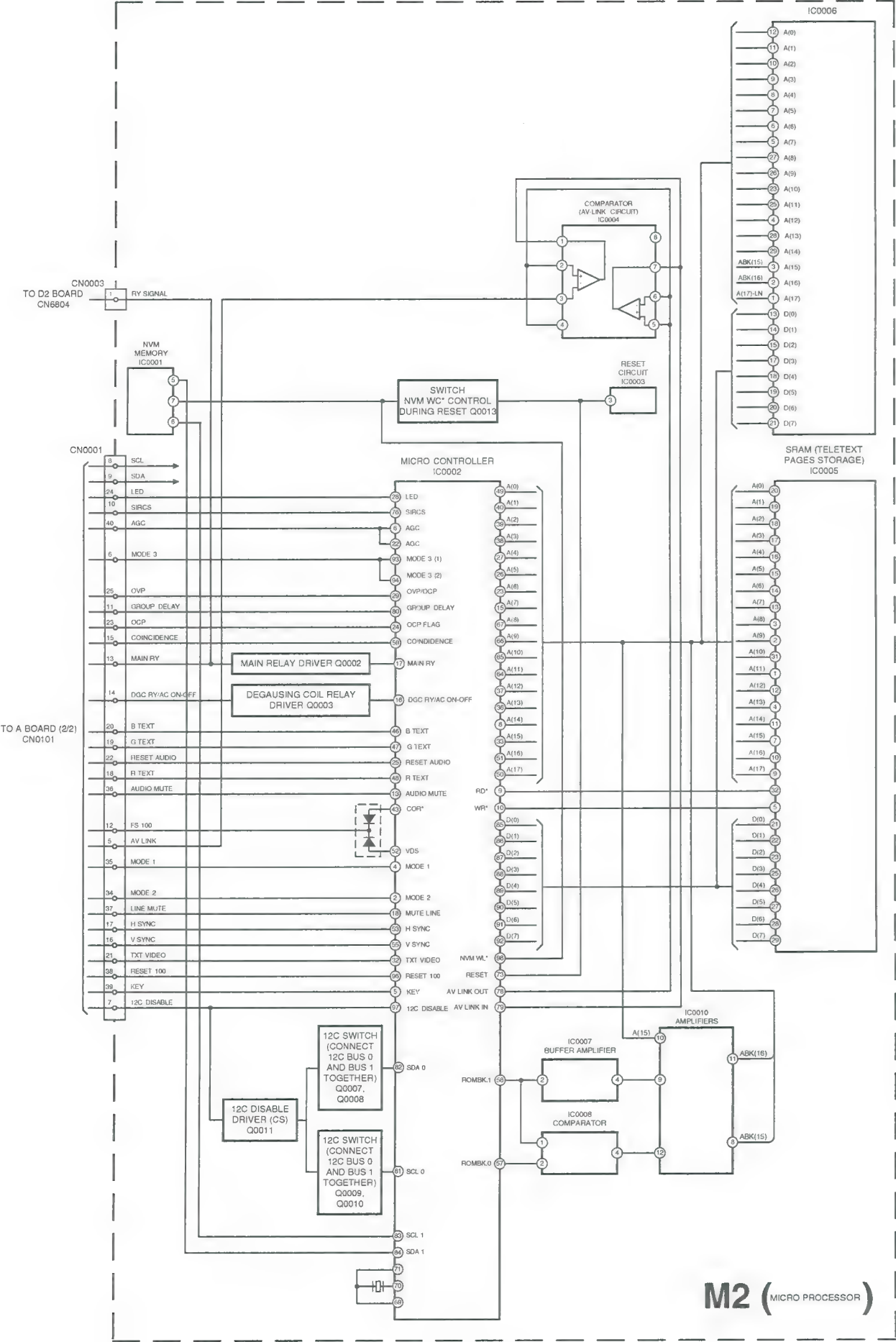


5-1. BLOCK DIAGRAMS (3)

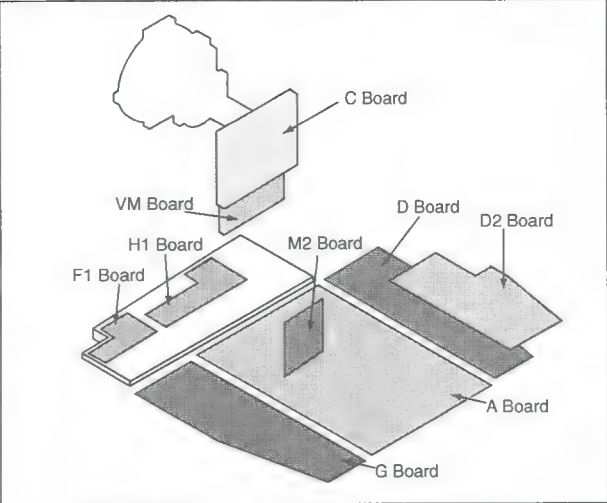













5-1. BLOCK DIAGRAMS (4)




5-2. CIRCUIT BOARD LOCATION



5-3. SCHEMATIC DIAGRAMS AND PRINTED WIRING BOARDS

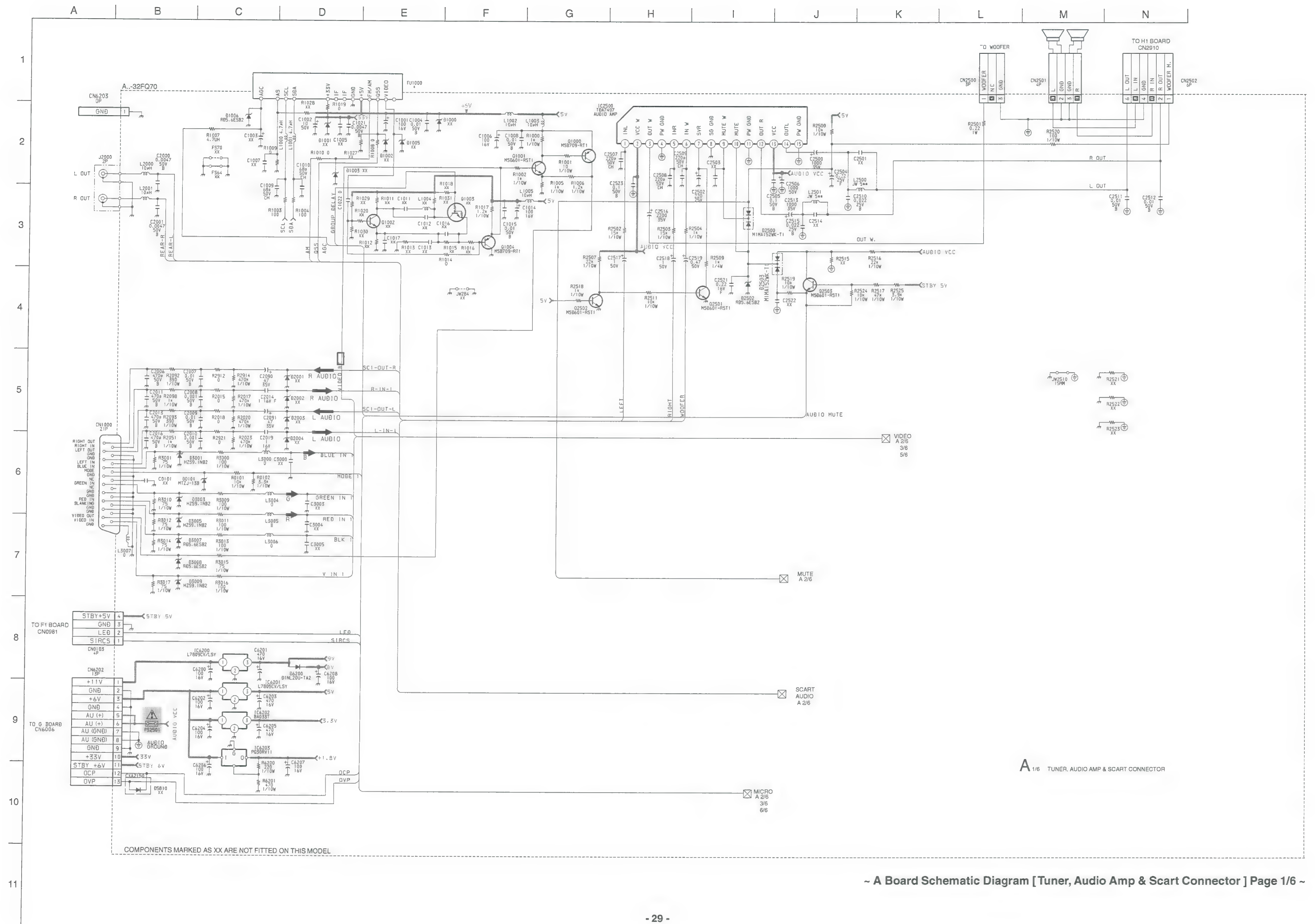
- Note :**
- All capacitors are in  $\mu\text{F}$  unless otherwise noted.
  - $\text{pF} : \mu\text{F}$  50WV or less are not indicated except for electrolytic types.
  - Indication of resistance, which does not have one for rating electrical power, is as follows.
- Pitch : 5mm  
Electrical power rating : 1/4W
- Chip resistors are 1/10W
  - All resistors are in ohms.  
 $k = 1000 \text{ ohms}$ ,  $M = 1000,000 \text{ ohms}$
-  : nonflammable resistor.
  -  : fusible resistor.
  -  : internal component.
  -  : panel designation or adjustment for repair.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
  - All voltages are in Volts.
  - Readings are taken with a 10Mohm digital mutimeter.
  - Readings are taken with a color bar input signal.
  - Voltage variations may be noted due to normal production tolerances.
-  : B + bus.
  -  : B - bus.
  -  : RF signal path.
  -  : earth - ground.
  -  : earth - chassis.

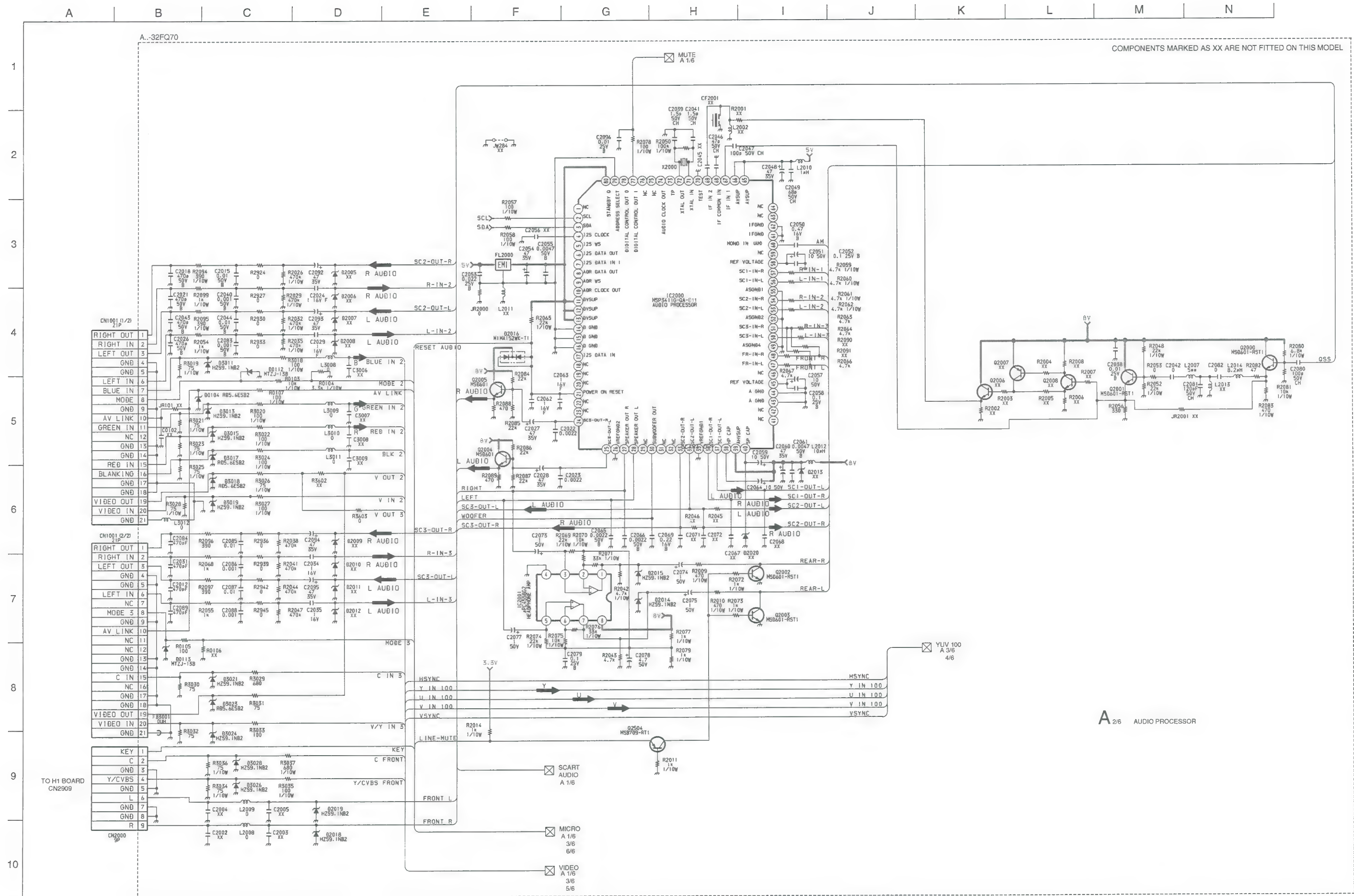
Reference Information

RESISTOR	RN	: METAL FILM
	RC	: SOLID
	FPRD	: NON FLAMMABLE CARBON
	FUSE	: NON FLAMMABLE FUSIBLE
	RS	: NON FLAMMABLE METAL OXIDE
	RB	: NON FLAMMABLE CEMENT
	RW	: NON FLAMMABLE WIREWOUND
		: ADJUSTMENT RESISTOR
COIL	LF-8L	: MICRO INDUCTOR
CAPACITOR	TA	: TANTALUM
	PS	: STYROL
	PP	: POLYPROPYLENE
	PT	: MYLAR
	MPS	: METALIZED POLYESTER
	MPP	: METALIZED POLYPROPYLENE
	ALB	: BIPOLAR
	ALT	: HIGH TEMPERATURE
	ALR	: HIGH RIPPLE

**Note :** The components identified by shading and marked  $\Delta$  are critical for safety. Replace only with the part numbers specified in the parts list.

**Note :** Les composants identifiés par une trame et par une marque  $\Delta$  sont d'une importance critique pour la sécurité. Ne les remplacer que par des pièces de numéro spécifié.













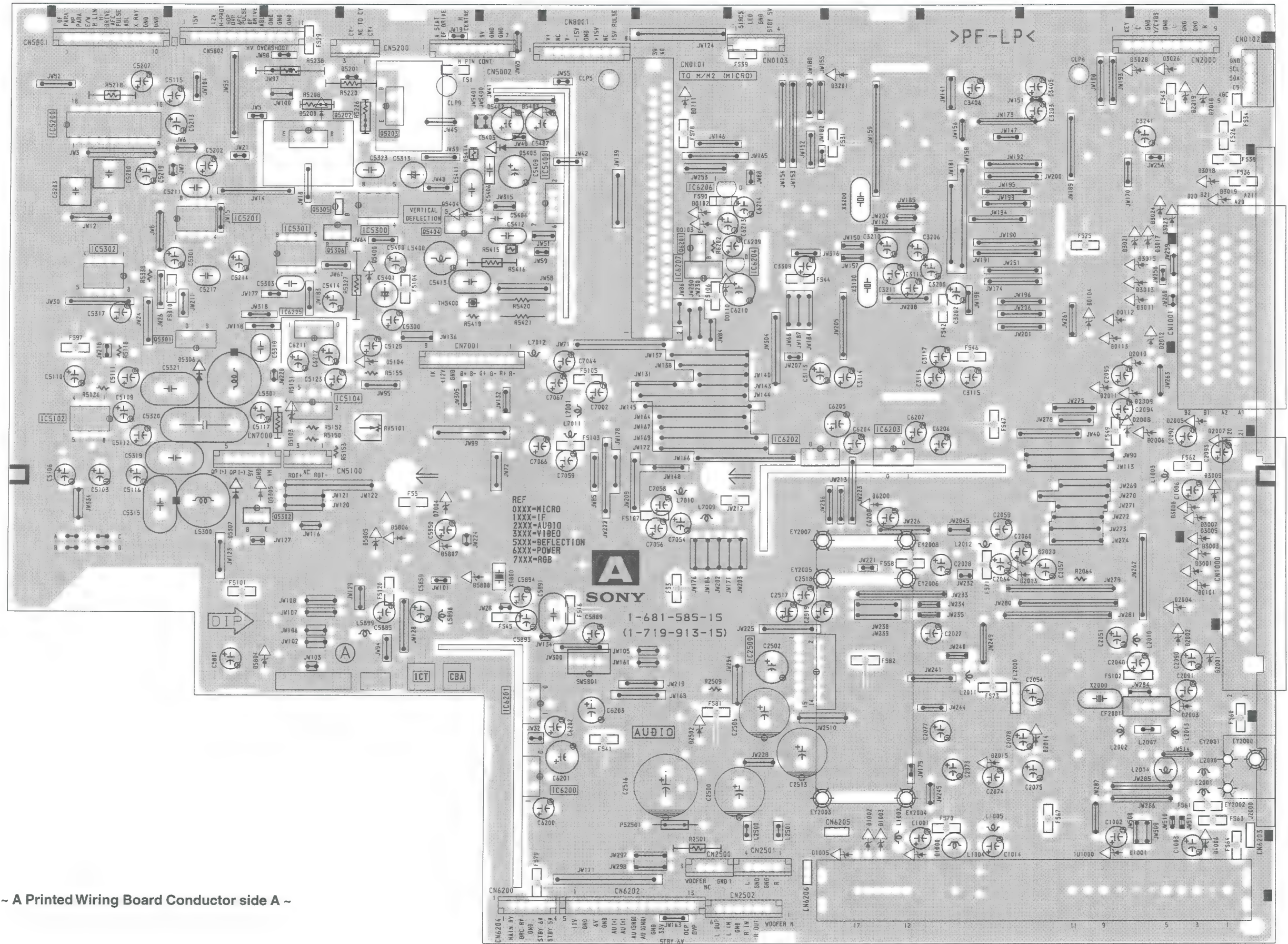






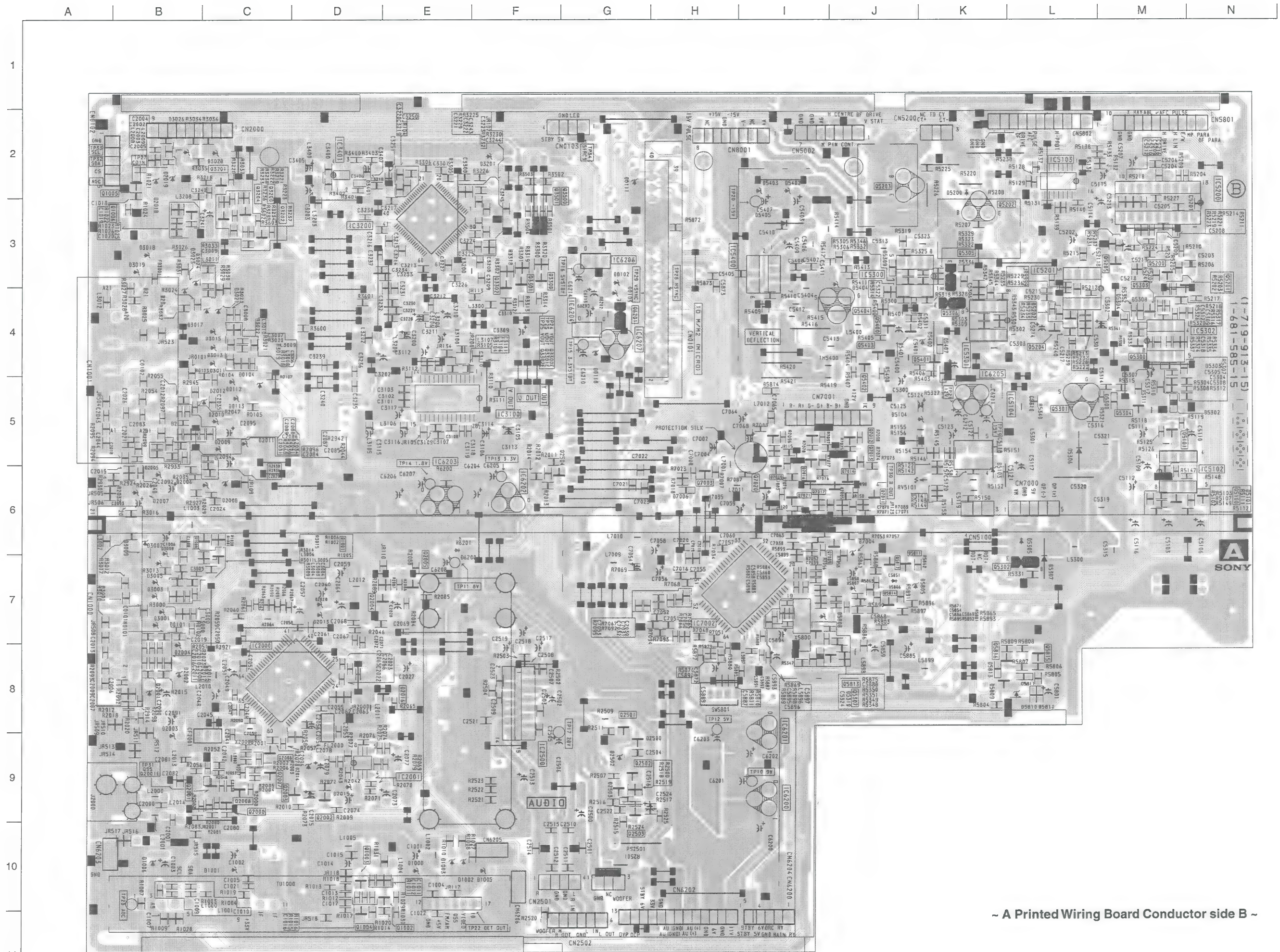
A B C D E F G H I J K L M N

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11



~ A Printed Wiring Board Conductor side A ~

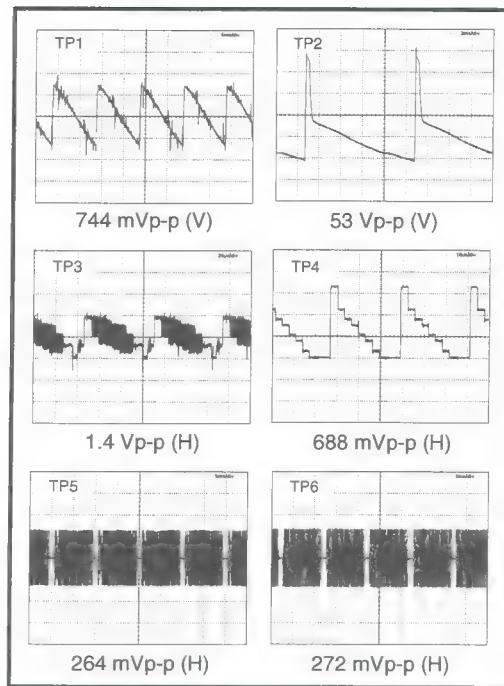




~ A Printed Wiring Board Conductor side B ~



~ A Board Waveforms ~



~ A Board Location Table (A Side) ~

DIODE		D1006	M - 10	D3003	M - 7	D3015	M - 4	D3026	M - 2	D5305	D - 6	D6200	J - 6	IC5301	D - 4	IC6206	H - 3
D0101	M - 7	D2014	L - 9	D3005	M - 7	D3017	M - 4	D3028	M - 2	D5306	C - 5	D7004	F - 7	IC5302	B - 4	IC6207	H - 4
D0104	L - 5	D2015	K - 9	D3007	M - 7	D3018	N - 3	D3201	J - 2	D5307	D - 7	IC		IC5400	G - 4	TRANSISTOR	
D0110	I - 4	D2018	M - 2	D3008	M - 7	D3019	N - 3	D5103	D - 6	D5400	E - 4	IC5104	D - 6	IC6201	G - 9	Q5202	E - 2
D0111	H - 2	D2019	M - 2	D3009	N - 7	D3021	M - 4	D5104	E - 5	D5404	F - 4	IC5200	B - 3	IC6202	I - 6	Q5301	C - 5
D0112	M - 4	D2502	H - 9	D3011	M - 4	D3023	M - 4	D5200	D - 2	D5405	F - 3	IC5201	C - 4	IC6203	J - 6	Q5306	E - 4
D0113	M - 5	D3001	M - 7	D3013	M - 4	D3024	M - 4	D5201	E - 2	D5807	F - 7	IC5300	E - 4	IC6205	D - 5	Q5404	F - 4

~ A Board Location Table (B Side) ~

DIODE	D2503	G - 9	D3024	B - 3	D5309	J - 3	IC5103	L - 3	TRANSISTOR	Q3201	C - 2	Q5300	M - 4	Q7003	H - 6
D0101	B - 7	D3001	B - 7	D3026	B - 2	D5400	K - 4	IC5104	K - 5	Q1000	C - 6	Q3202	C - 3	Q5301	L - 5
D0104	C - 5	D3003	B - 7	D3028	C - 2	D5401	J - 4	IC5200	M - 3	Q1001	D - 6	Q3204	C - 3	Q5302	K - 7
D0110	G - 4	D3005	B - 7	D3201	F - 2	D5404	J - 3	IC5201	L - 4	Q1004	D - 11	Q3300	F - 3	Q5303	M - 4
D0111	G - 2	D3007	B - 6	D5103	L - 6	D5405	I - 3	IC5300	J - 3	Q1005	B - 2	Q3301	F - 3	Q5304	M - 5
D0112	C - 5	D3008	B - 6	D5104	J - 5	D5809	K - 8	IC5301	K - 4	Q1006	B - 3	Q3302	F - 3	Q5305	K - 3
D0113	C - 5	D3009	B - 6	D5200	K - 2	D5811	L - 8	IC5302	M - 4	Q2000	C - 9	Q3500	F - 3	Q5306	K - 4
D1006	B - 10	D3011	C - 4	D5202	L - 4	D5812	L - 8	IC5400	I - 3	Q2002	D - 9	Q3501	F - 3	Q5400	J - 4
D2014	C - 9	D3013	C - 4	D5300	L - 5	D6200	E - 7	IC6200	I - 9	Q2003	D - 9	Q5101	M - 5	Q5401	J - 4
D2015	D - 9	D3015	C - 4	D5303	N - 4	<b>IC</b>		IC6201	I - 8	Q2004	E - 7	Q5200	M - 4	Q5402	J - 5
D2016	E - 8	D3017	B - 4	D5304	M - 4	IC2000	C - 8	IC6202	F - 6	Q2005	E - 7	Q5201	N - 4	Q5403	J - 4
D2018	B - 2	D3018	B - 3	D5305	L - 6	IC2001	D - 9	IC6203	E - 6	Q2501	G - 8	Q5202	K - 3	Q5404	J - 4
D2019	B - 2	D3019	B - 3	D5306	L - 5	IC2500	F - 8	IC6205	K - 5	Q2502	G - 9	Q5203	J - 2	Q5813	J - 8
D2500	G - 9	D3021	C - 4	D5307	L - 7	IC3100	E - 5	IC6206	G - 3	Q2503	G - 9	Q5204	L - 4	Q5815	L - 8
D2502	G - 9	D3023	B - 3	D5308	M - 4	IC3200	E - 3	IC6207	G - 4	Q3200	C - 3	Q5205	M - 3	Q5816	L - 8

~ A Board Semiconductor Voltage Table ~

Ref	(s)	(g)	(d)	Ref	(e)	(b)	(c)	Ref	(e)	(b)	(c)	Ref	(e)	(b)	(c)	Ref	(e)	(b)	(c)
Q3500	2.7	3.3	3.9	Q2002	0	0	4	Q3204	5	4.4	3.4	Q5205	1.9	1.2	0	Q5813	0	7.9	0
Q3501	2.7	3.3	4	Q2003	0	0	4	Q3300	0.7	1.3	5	Q5300	0	0.4	2.2	Q5814	0	0	0
Q5301	0	5.1	51.2	Q2004	3.3	3.9	8.3	Q3301	1.9	1.2	0	Q5301	5.1	0	51.2	Q5815	0	0	5
Q5404	0	0	0.5	Q2005	3.3	3.9	8.3	Q3302	1.9	1.2	0	Q5302	8.9	5.7	0	Q5816	5	5	0
Ref	(e)	(b)	(c)	Q2501	0	0	15.2	Q3500	3.3	2.7	3.9	Q5304	0	0.4	5.6	Q7003	5.6	6.2	8.8
Q1001	3.2	3.9	8.3	Q2502	0	0.7	0	Q3501	3.3	2.7	4	Q3400	0	0	0.1	Q7009	3.2	7	0.1
Q1004	1.9	1.3	0	Q2503	0.6	0.6	0.5	Q5101	0	0.4	6.4	Q5401	0	0	7.9	Q7011	2.5	1.9	0
Q1005	0	0.5	5	Q3200	1.9	2.5	4.4	Q5201	2.8	3.4	7.9	Q5402	0	0	-11.3	Q7012	11.6	10.9	8.7
Q1006	5	4.7	1	Q3201	1.9	2.5	4.4	Q5202	0.2	0.8	11.7	Q5403	-13.5	-11.2	-8.3	Q7013	6	6.6	10.9
Q2000	4.2	4.8	8.3	Q3202	5	4.4	3.4	Q5203	0.2	0.8	11.7	Q5404	0	0	0.5	Q7014	2.5	1.8	0

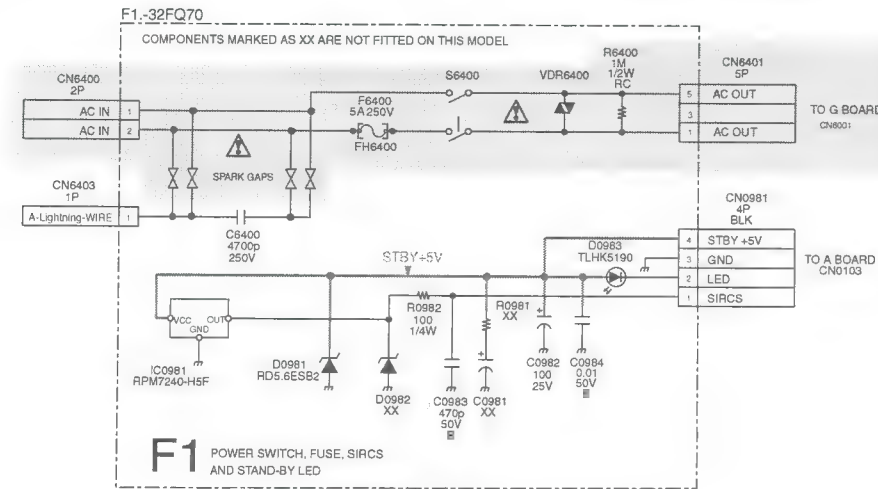
~ A Board IC Voltage Table ~

Ref No	Pin No	Volts (V)	Ref No	Pin No	Volts (V)	Ref No	Pin No	Volts (V)	Ref No	Pin No	Volts (V)
IC5103	1	3.3	IC5301	5	6.5	IC7002	10	0.4	IC7002	38	0
	2	3.3		6	7.1		11	1.9		39	4.8
	3	1.9		7	0.4		12	0.4		40	4.8
	4	2.6		8	12		13	0.9		41	4.8
	5	2.5	IC5302	1	0		14	5		42	0
	6	1.8		2	5.8		15	2.5		43	0
	7	2		3	6.3		16	0		44	0
	8	0		4	0		17	3		45	6.3
	9	3.1		5	6.6		18	2.7		46	8.9
	10	3		6	6.5		19	3.9		47	8.9
	11	5	IC5400	7	0.4		20	0		48	6
	12	5		8	12		21	6.1		49	2.5
	13	5		1	1.4		22	2.7		50	4.1
	14	0		2	13.2		23	8.8		51	0
	15	0		3	-12.5		24	0		52	6
	16	5		4	-15.4		25	4.3		53	5.8
IC5300	1	6		5	-0.4		26	3.2		54	5.8
	2	6	IC7002	6	13.7		27	5.2		55	0.4
	3	6		7	1.4		28	0.3		56	5.8
	4	0		1	3.6		29	4.9		57	5.8
	5	6		2	0		30	3.4		58	5.8
	6	6		3	4.4		31	5.6		59	0.3
	7	6		4	4.8		32	8.9		60	0
	8	12		5	3.5		33	0		61	0
IC5301	1	1.7		6	3.4		34	4.7		62	2.9
	2	8.5		7	7.6		35	4.7		63	3.7
	3	6.5		8	0		36	4.7			
	4	0		9	0		37	8.9			

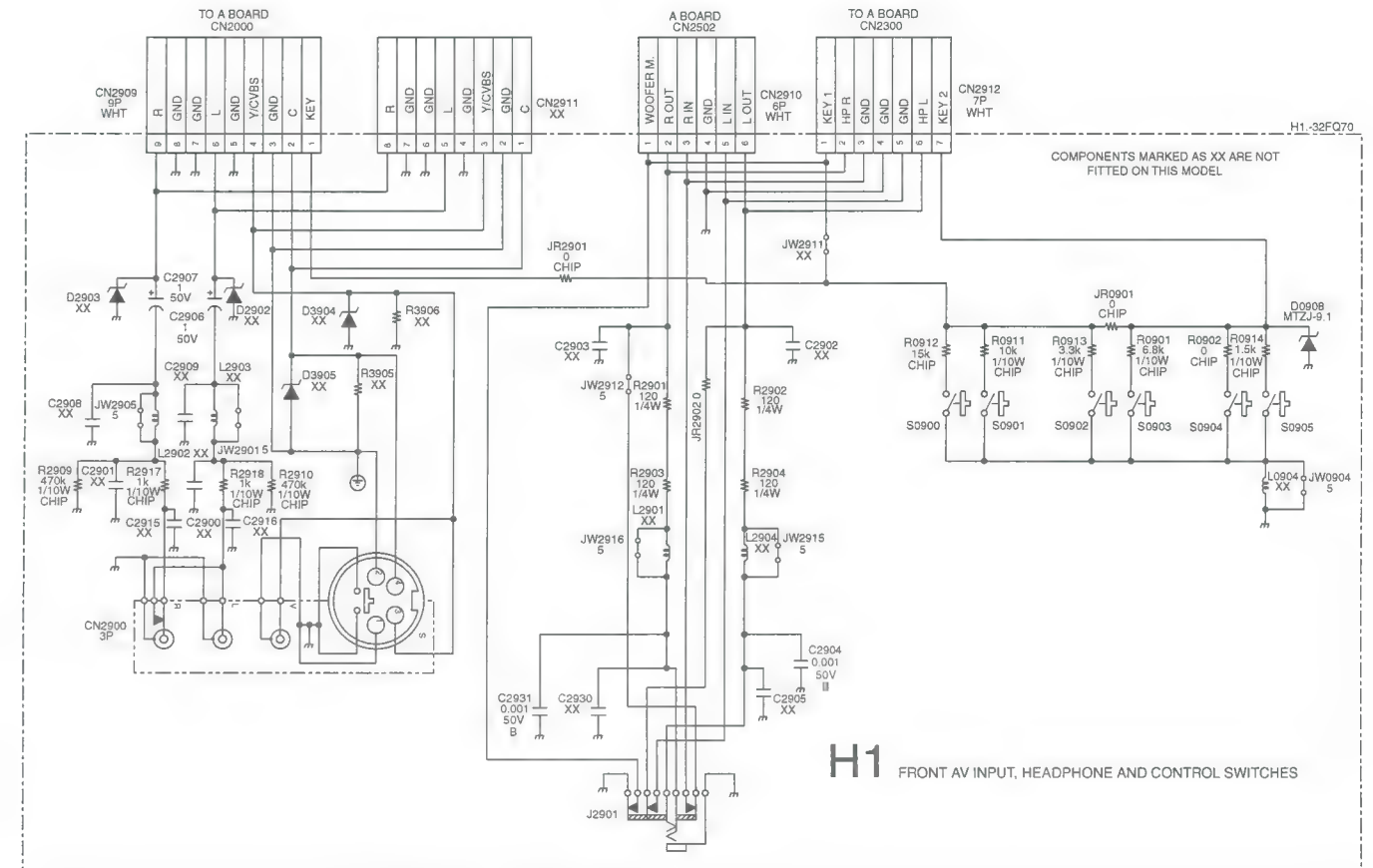
~ A Board Difference Table ~

Ref	KV-32FQ70B	KV-32FQ70E	KV-32FQ70K	KV-32FQ70U
TU1000	FRONTEND BTF-EF411	FRONTEND BTF-EC411	FRONTEND BTF-EC411	FRONTEND BTF-EU611

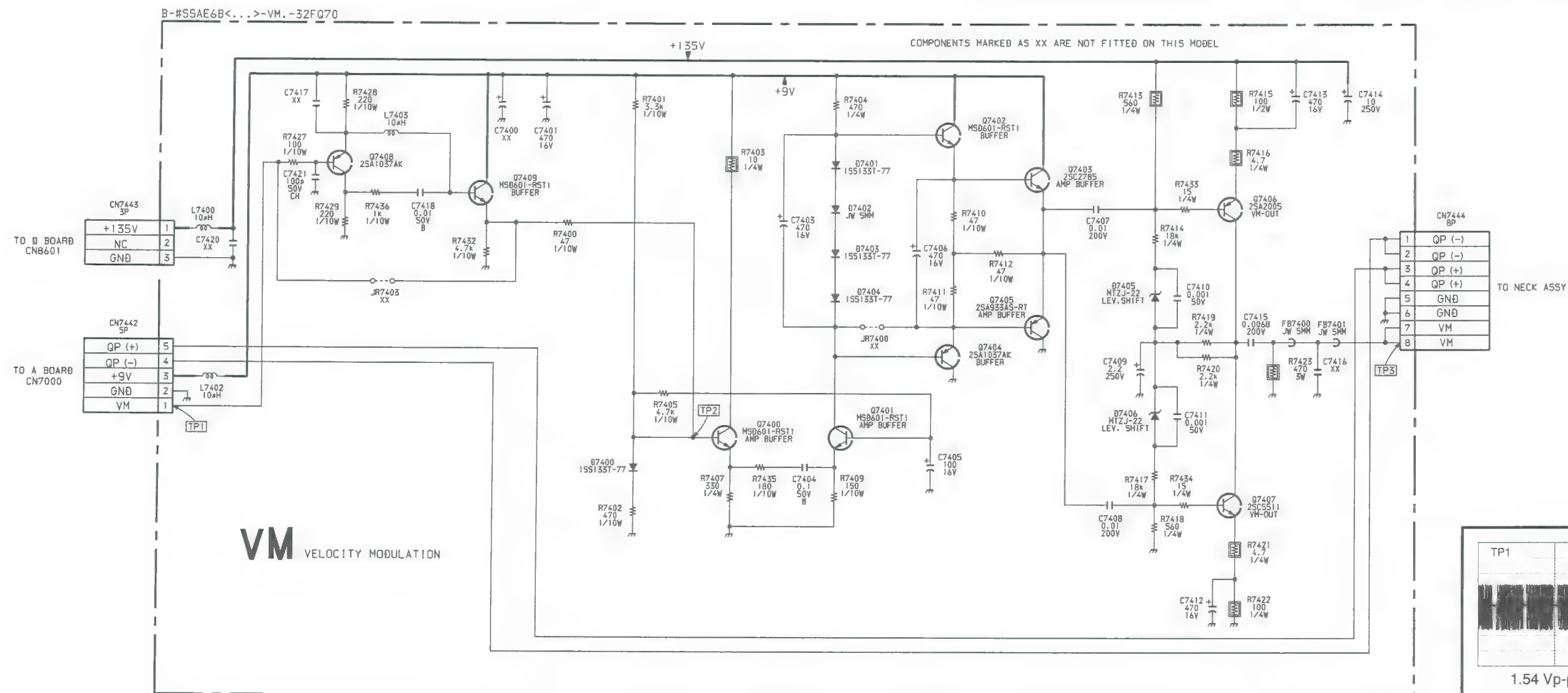
~ F1 Board Schematic Diagram [ Power Switch, Fuse, SIRCS and Stand-By LED ] ~



~ H1 Board Schematic Diagram [ Front AV Input, Headphone and Control Switches ] ~



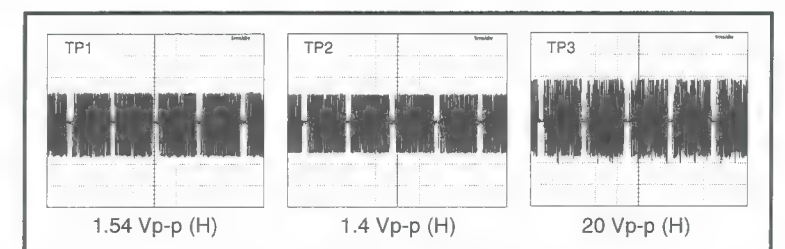
~ VM Board Schematic Diagram [ Velocity Modulation ] ~



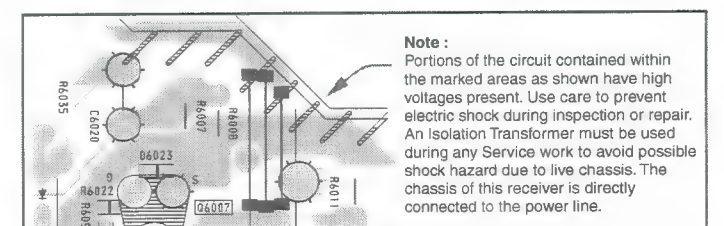
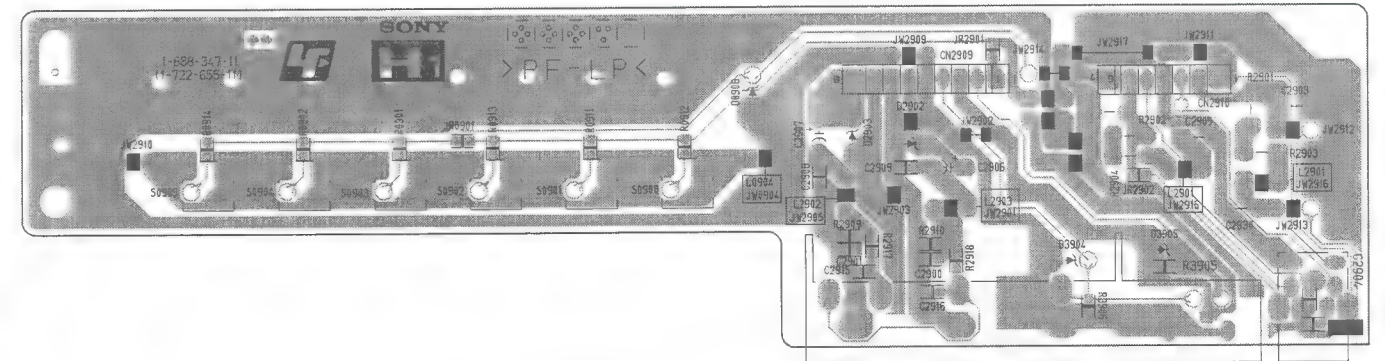
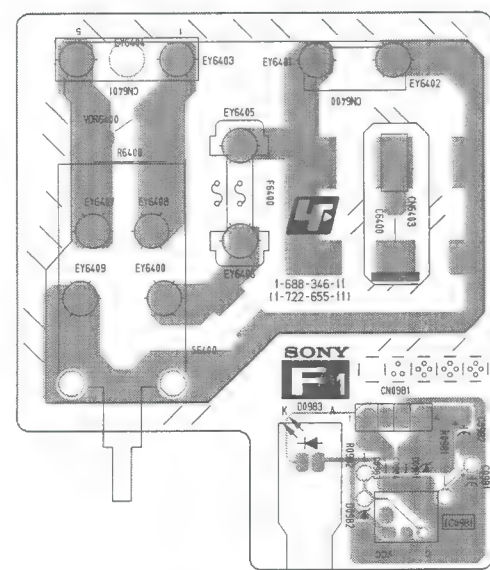
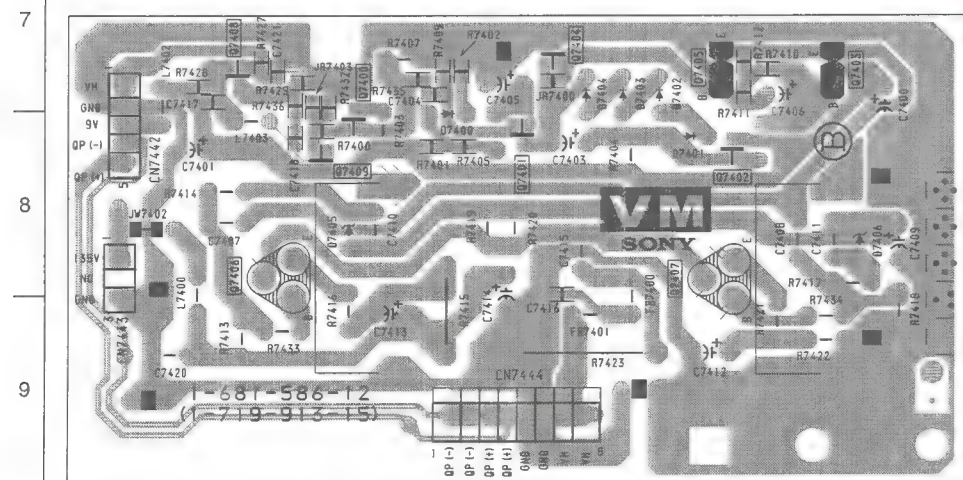
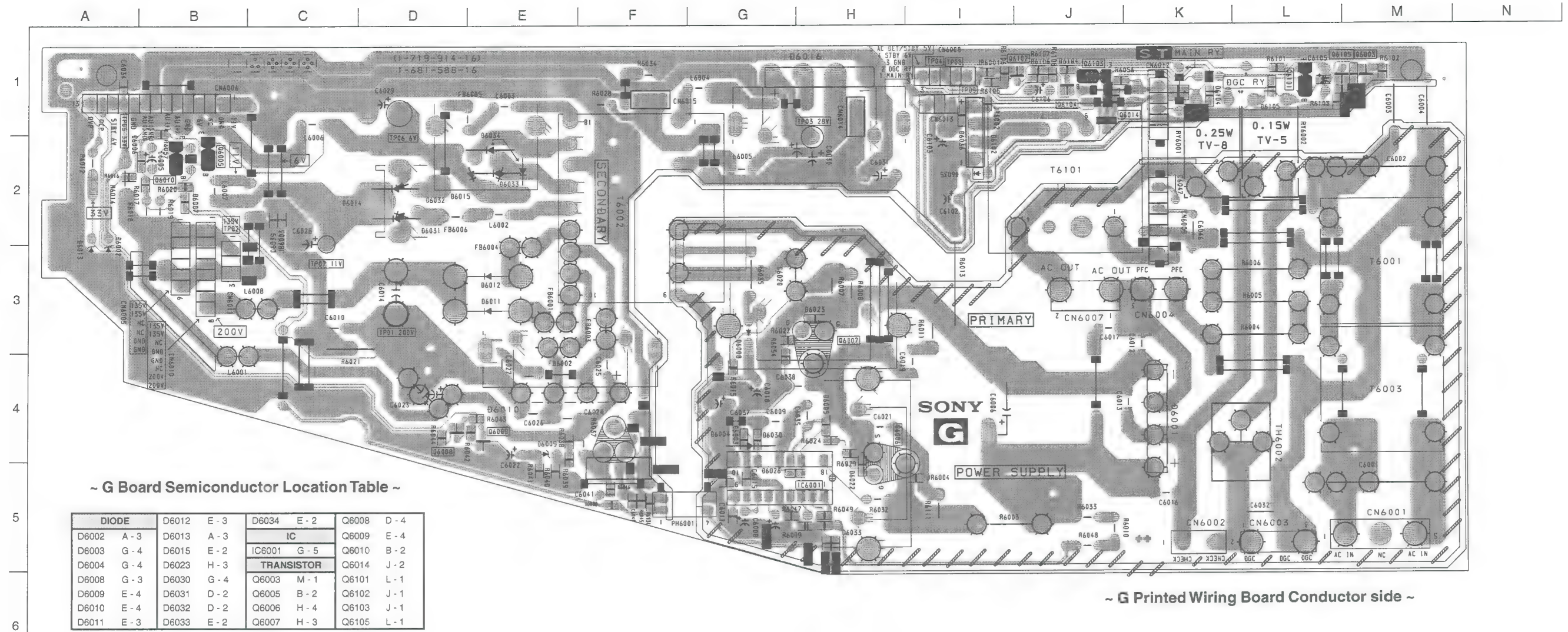
~ VM Board Voltage Table ~

Ref	(e)(s)	(b)(g)	(c)(d)
Q7400	5.0	5.7	8.7
Q7401	0.9	1.5	4.1
Q7402	5.5	6.1	8.9
Q7403	5.1	5.5	8.9
Q7404	4.7	4.1	0
Q7405	5.1	4.7	0
Q7406	134	133.8	68
Q7407	1.1	1.4	68
Q7408	6.3	5.6	2.5
Q7409	5.7	6.3	0.9

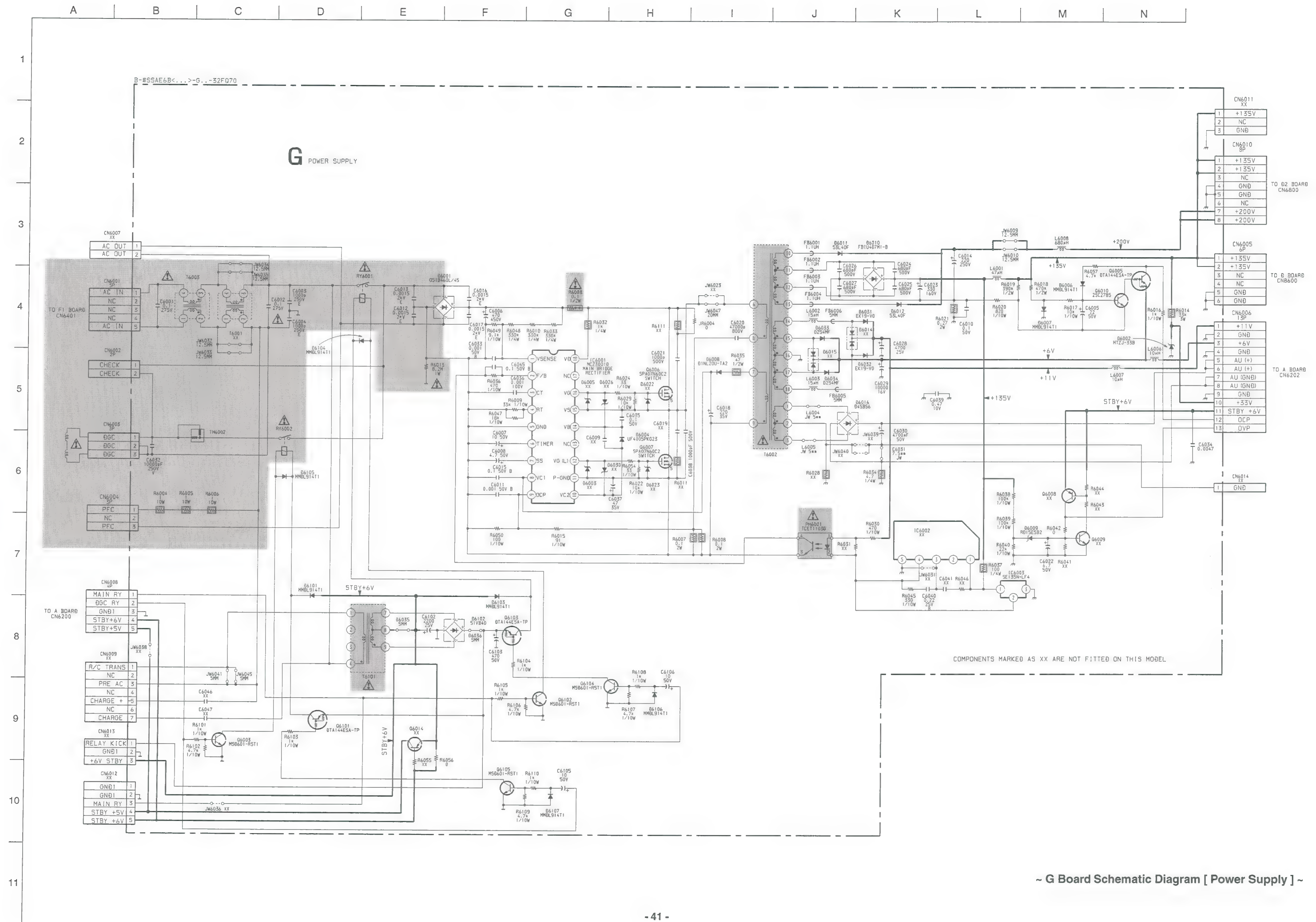
~ VM Board Waveforms ~

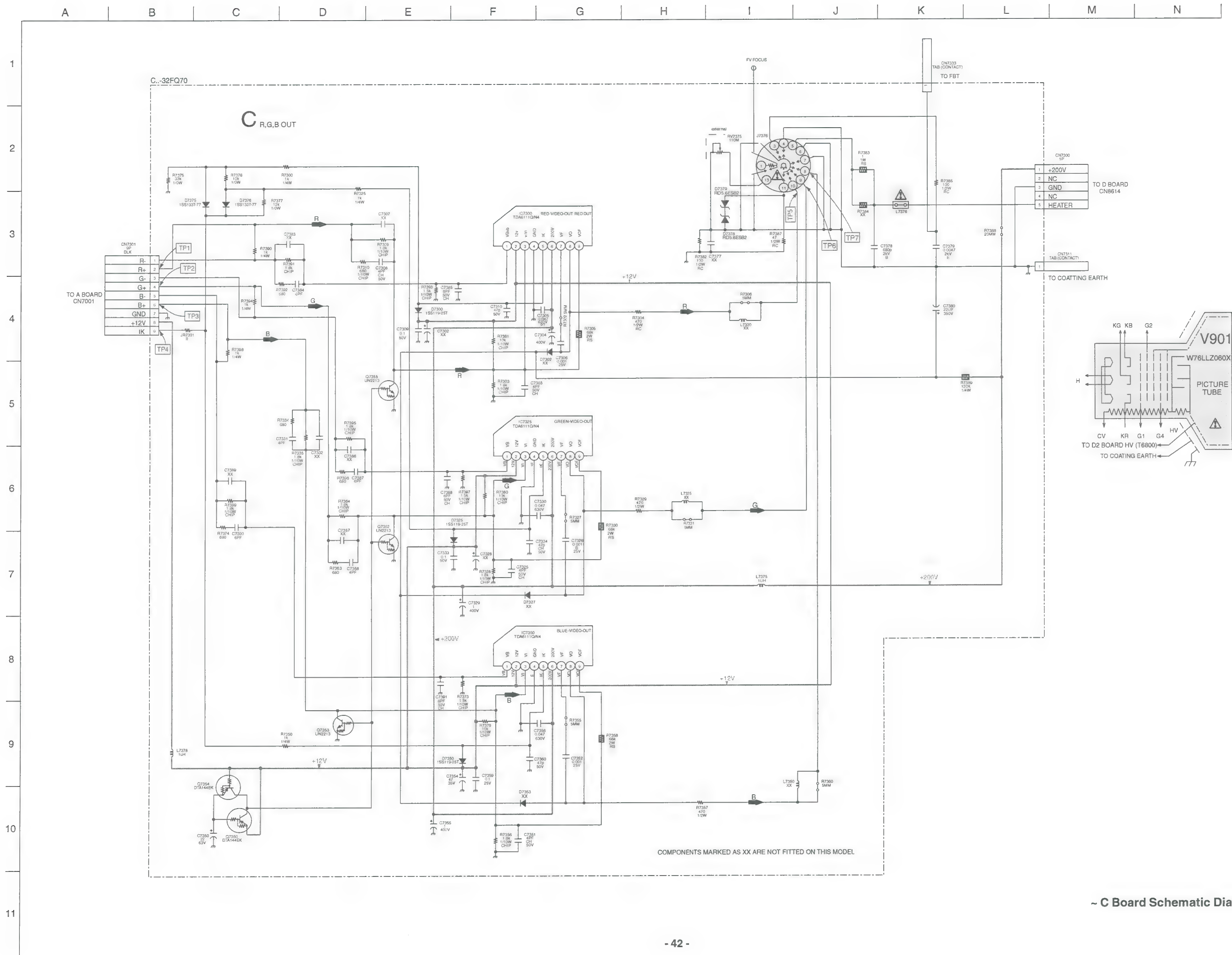








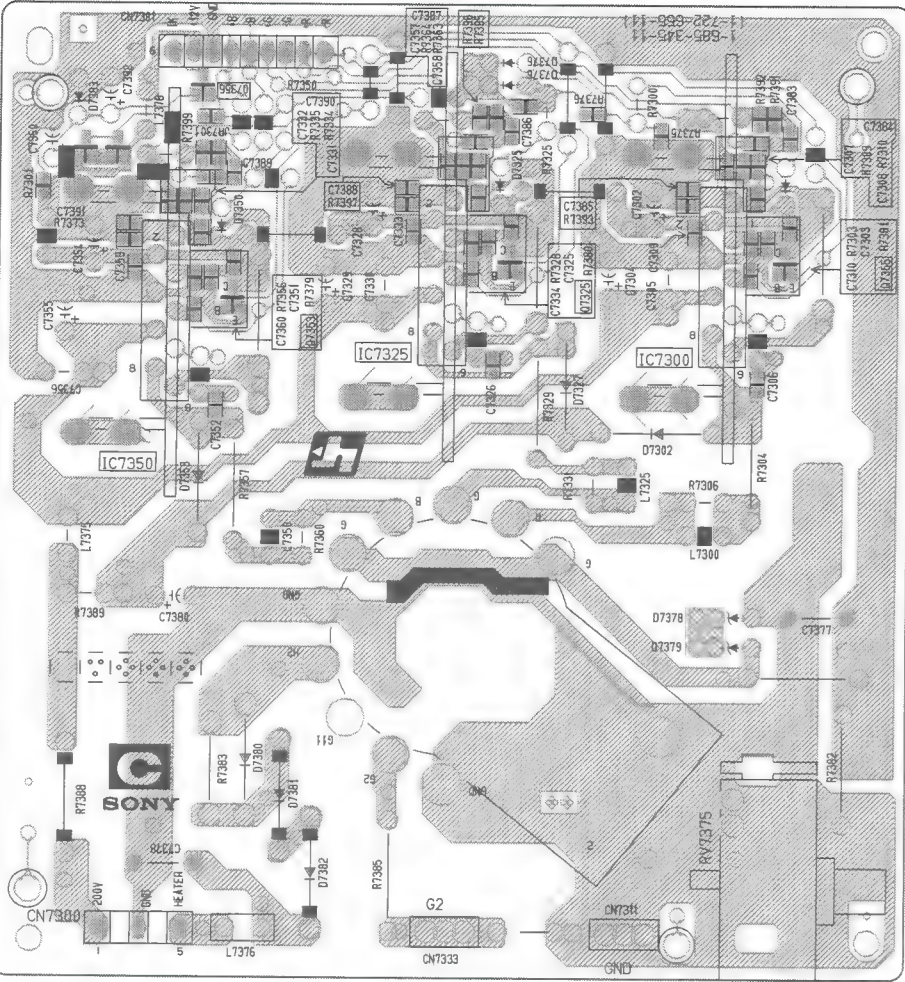




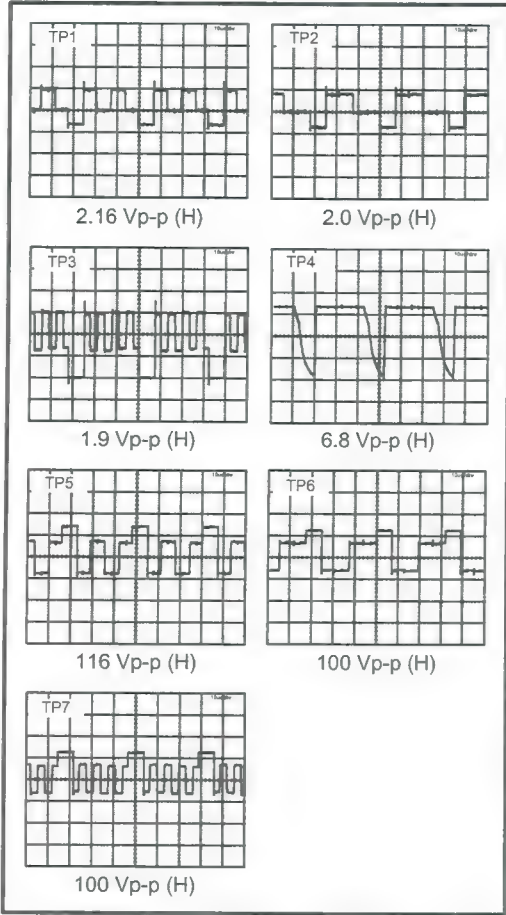
~ C Board Schematic Diagram [ R-G-B Out ] ~



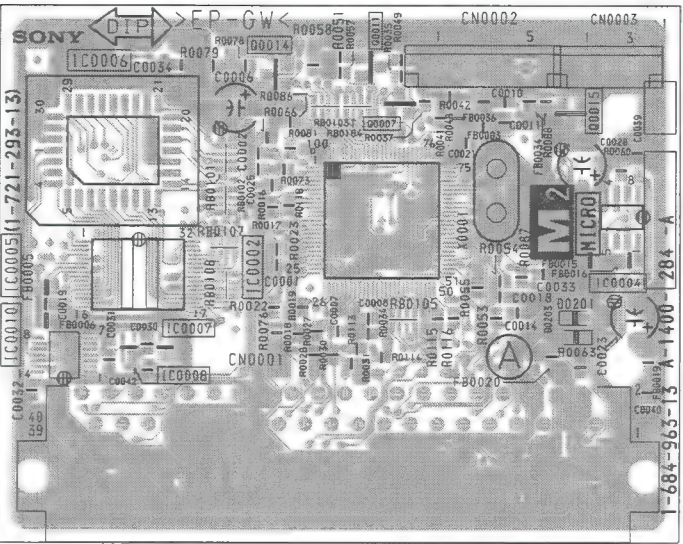
~ C Printed Wiring Board Conductor side ~



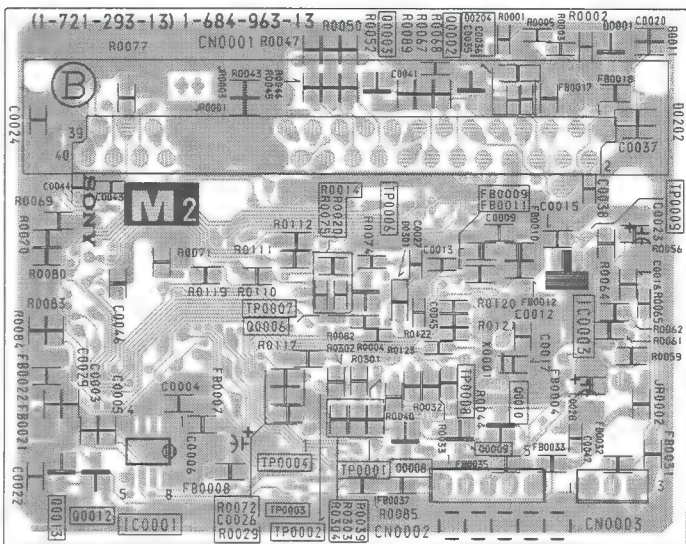
~ C Board Waveforms ~



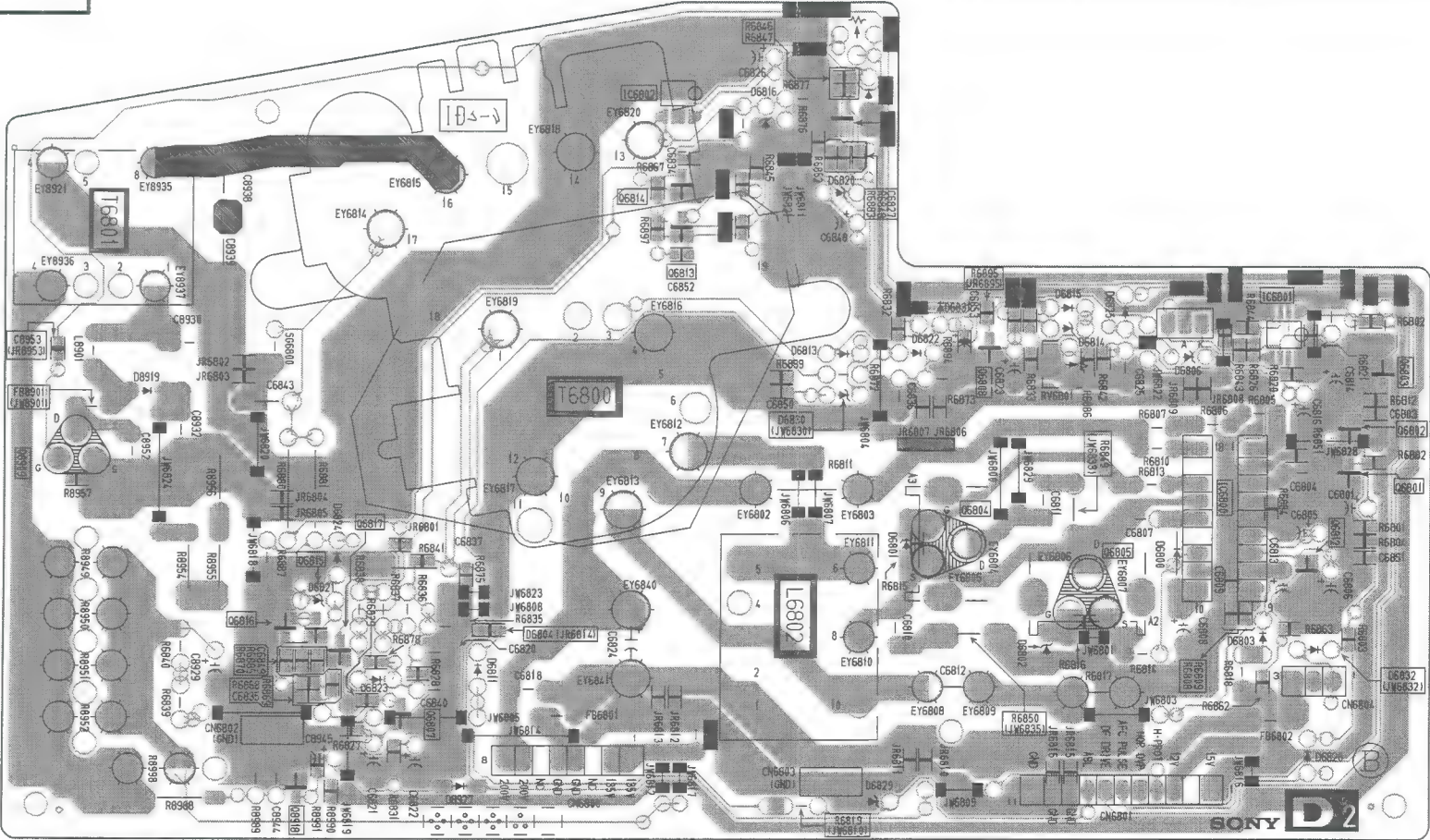
~ M2 Printed Wiring Board Conductor side A ~



~ M2 Printed Wiring Board Conductor side B ~



~ D2 Printed Wiring Board Conductor side ~



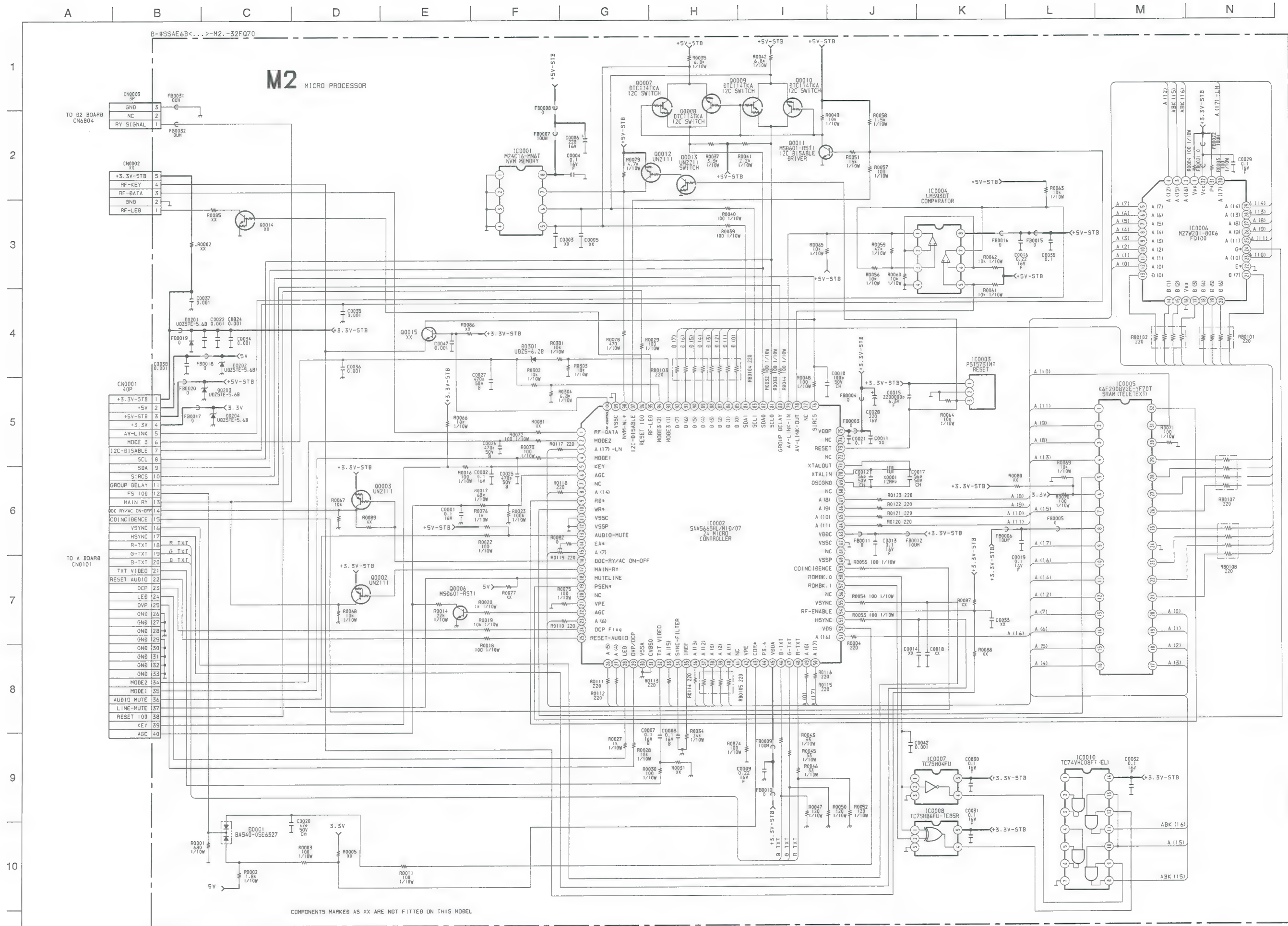
~ C Board Semiconductor Voltage Table ~

Ref	(e)	(b)	(c)
Q7350	12	11.98	0
Q7352	0	0	3.8
Q7353	0	0	3.8
Q7354	11.98	12	0
Q7355	0	0	3.8

~ C Board IC Voltage Table ~

IC Voltage Table		
Ref No	Pin No	Voltage (V)
IC7300	1	3.9
	3	3.8
	5	7.5
	6	200
	7	140
IC7325	8	153
	9	140
	1	3.9
	3	3.8
	5	7.7
IC7350	6	200
	7	140
	8	153
	9	140
	1	3.9
IC7350	3	3.8
	5	7.5
	6	200
	7	139
	8	148
IC7350	9	138





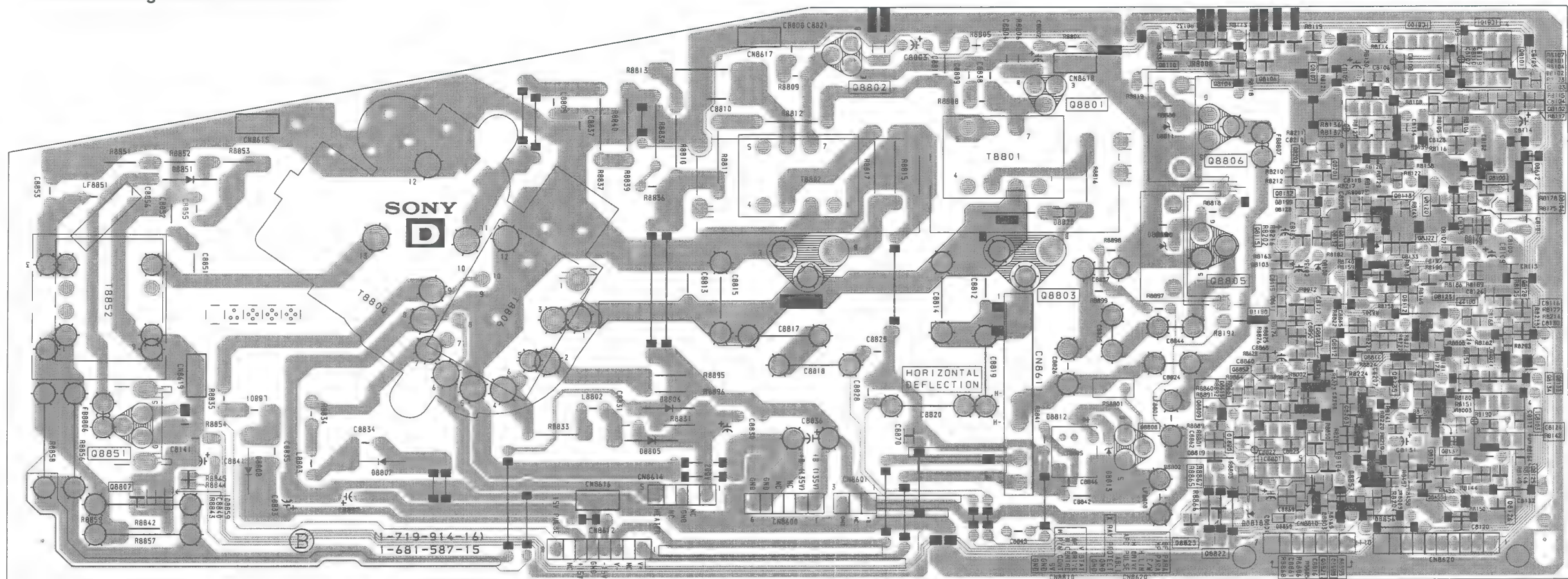
~ M2 Board Schematic Diagram [ Micro Processor ] ~



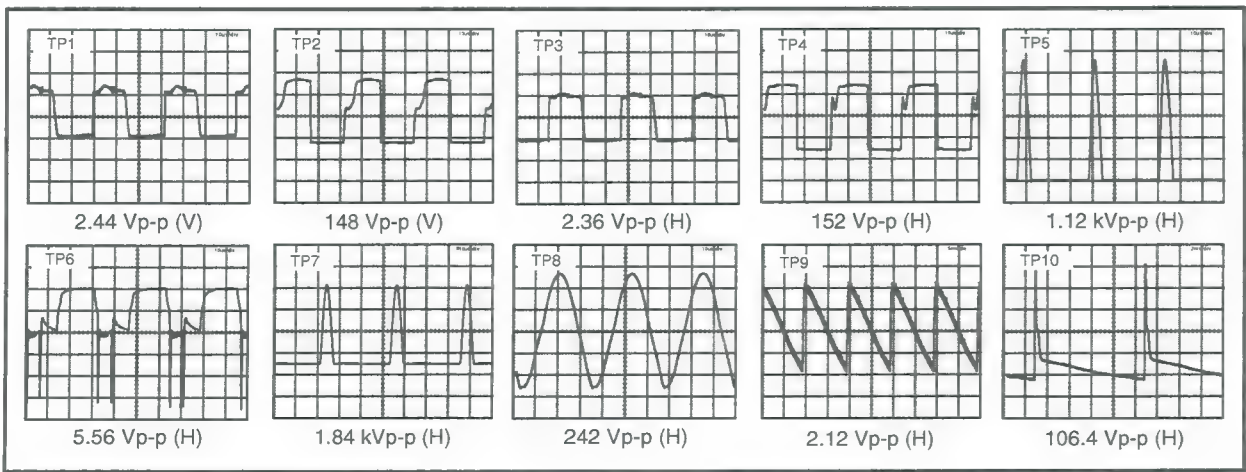




~ D Printed Wiring Board Conductor side ~



~ D Board Waveforms ~



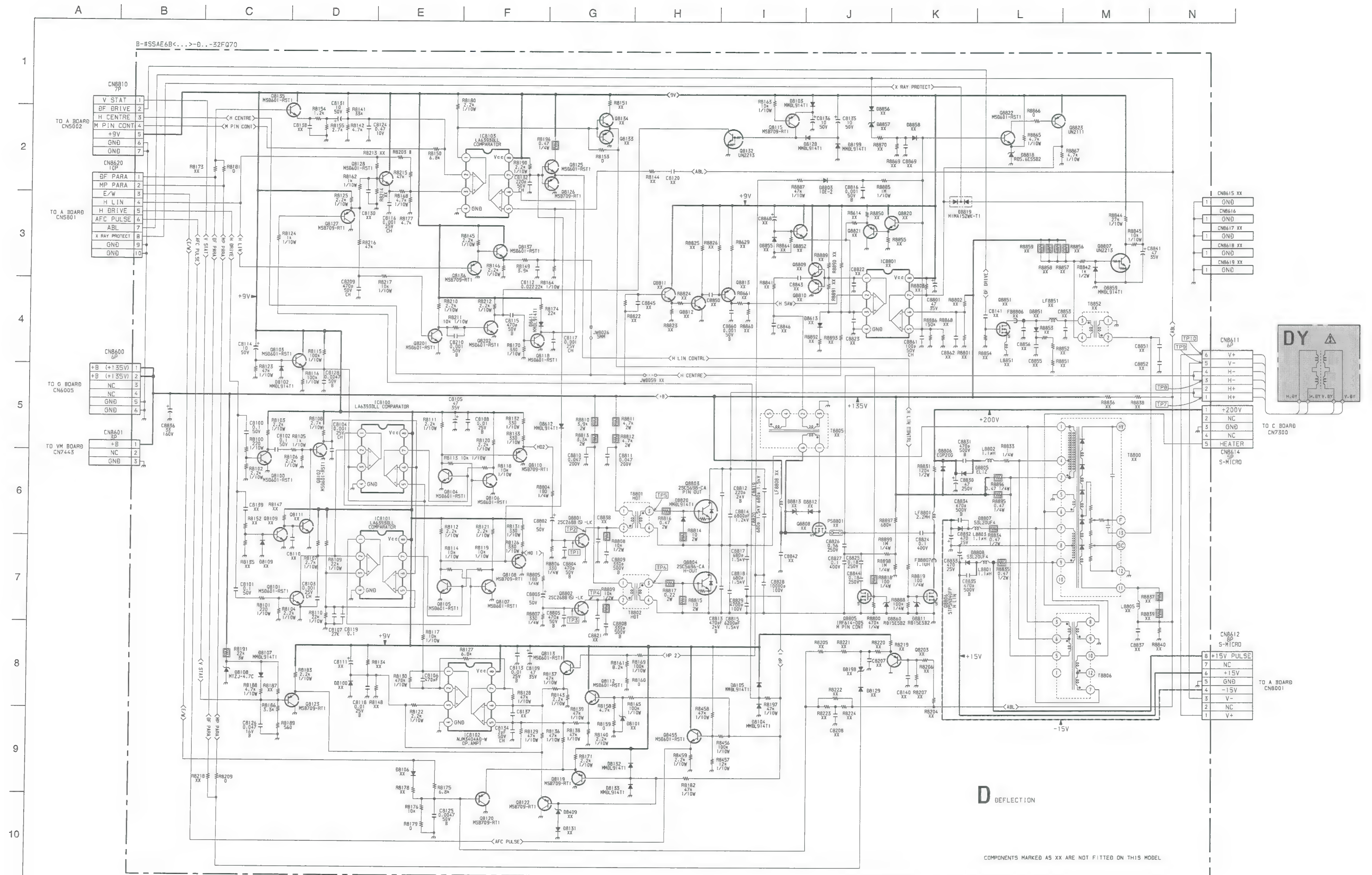
~ D Board IC Voltage Table ~

IC Voltage Table		
Ref No	Pin No	Voltage (V)
IC8100	1	0.3
	2	4.3
	3	4.1
	5	4.1
	6	3.0
	7	0.4
	8	0.4
IC8101	1	0.3
	2	4.3
	3	4.4
	5	4.4
	6	3.0
	7	0.4
	8	0.4
IC8102	1	4.1
	2	0.4
	3	0.4
	5	0.4
	6	0.4
	7	0.4
	8	0.4
IC8103	1	2.5
	2	2.1
	3	1.7
	5	1.6
	6	1.0
	7	1.1
	8	1.1

~ D Board Semiconductor Voltage Table ~

Ref	(e)(s)	(b)(g)	(c)(d)	Ref	(e)(s)	(b)(g)	(c)(d)	Ref	(e)(s)	(b)(g)	(c)(d)	Ref	(e)(s)	(b)(g)	(c)(d)
Q8100	0	0.6	3.6	Q8110	2.4	3.1	0	Q8128	3.4	1.5	8.9	Q8801	0	0.4	64.7
Q8101	0	0.6	4.3	Q8113	0.3	0.2	8.9	Q8132	0	0	3.4	Q8802	0	0.4	73.2
Q8102	0	0.3	4.3	Q8115	8.6	8.9	0	Q8135	2.6	3.2	8.9	Q8807	0	6.3	0
Q8103	4.0	0	8.9	Q8118	0	0	5.0	Q8136	2.5	1.8	0	Q8818	0	0	5.0
Q8104	0	0.4	3.1	Q8119	0.7	1.4	0	Q8137	1.8	2.5	8.9	Q8822	5.5	4.9	0
Q8105	0	0.4	3.2	Q8120	0.7	2.3	0	Q8201	0	0.6	3.9	Q8823	8.9	8.5	0
Q8106	0	0.3	4.3	Q8122	0.5	1.4	0	Q8202	0	0.8	3.4	Q8805	0	2.5	33
Q8107	0	0.3	4.2	Q8123	0.5	1.4	0	Q8203	1.4	0.9	0	Q8806	0	1.2	135
Q8108	2.4	3.2	0	Q8127	1.4	1.5	0	Q8455	1.1	1.7	8.9	Q8851	0	5.4	81.5

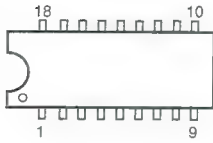




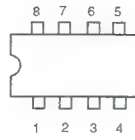
~ D Board Schematic Diagram [ Deflection ] ~

## 5-4. SEMICONDUCTORS

CXAB070AP  
MCZ3001D



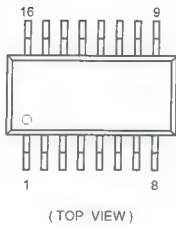
LM318P  
LM358N  
LM393DT  
LM393N  
M24C16-MN6T(A)



PST573IMT



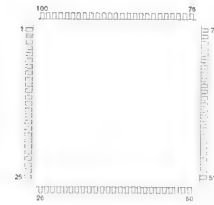
CXA1875AM-T4



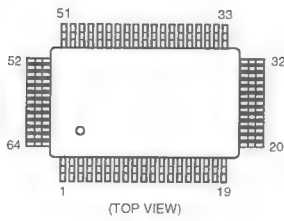
LM78L05ACZ



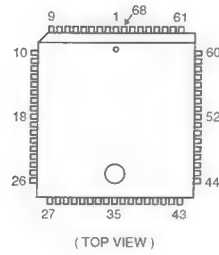
SAA5665HL/M1D/0358



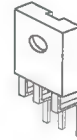
CXA2100AQ-TL



MSP3411G-QA-B11



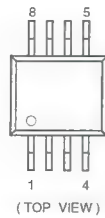
SBX3081-51(30)



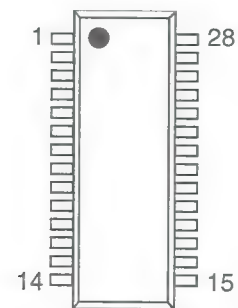
K6T2008V2E-YF70T



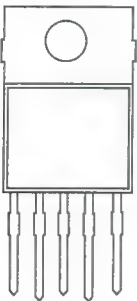
NJM3404AD-W  
UPC4558G2



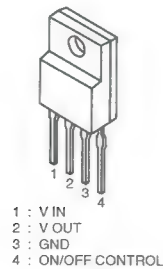
SDA9488X-B23GEG



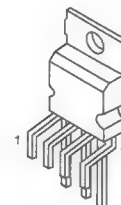
LA6500-FA



PQ30RV11



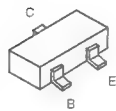
STV9379



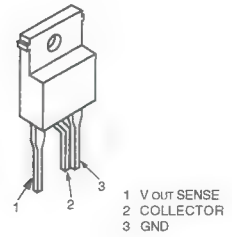
TCET1103G



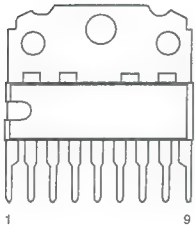
DTA144EK  
DTC144TKA-T146  
2SA1162-G



SE135N-LF4



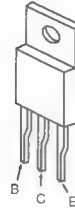
TDA6111Q/N4



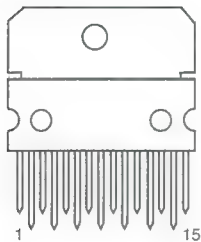
DTA144ESA  
2SA933AS-QT  
2SC2785-HFE



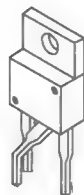
2SA1837(LBS2S0N)



TDA7497



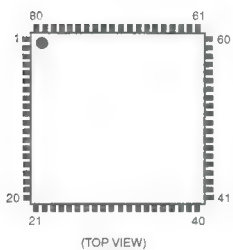
L7809CV/LSY  
STP5NB40FP  
STP5NB40(030Y)  
2SC5698-CA  
2S5696-SONY-CA



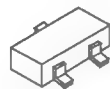
2SB734-34



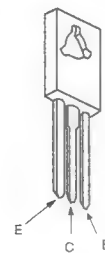
VPS9402-A32GEG



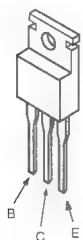
MSB709-RT1  
MSD601-RST1  
M1MA152WA-T1  
UN2111  
UN213  
2SK2036(TE85L)



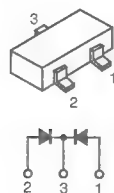
2SC2688(5)-LK



BA12T  
BAO33T  
IRF614-005  
IRF620  
SPA07N60C2  
2SA2005  
2SC5511



RB705D

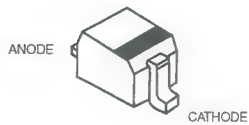


BAS216

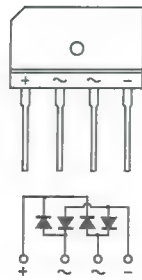




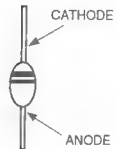
BAS316-115  
MMDL914T1  
UDZSTE-176.2B



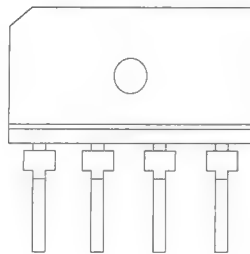
FBIU4D7MA-B  
RBV-406B  
S1VB40



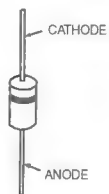
BYV98-200-RAS 15/12



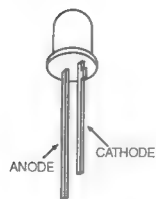
GS1B460/45



D1NL20U  
EGP20G  
EL1Z  
GP08D  
UF4005PKG23



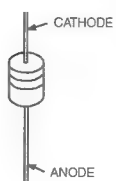
TLHK5190



D2S4MTA1

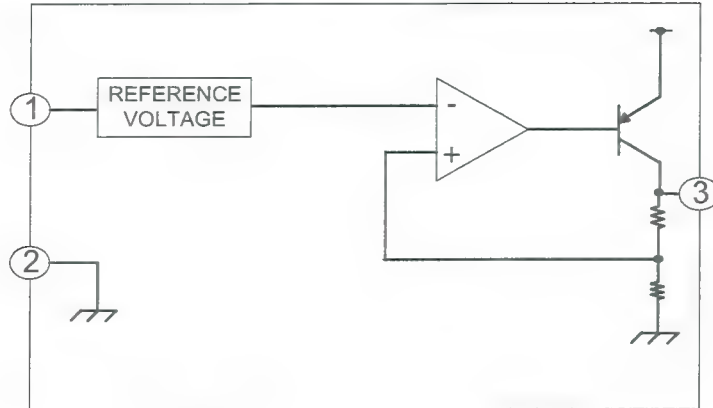


ERA38-06	MTZJ-T-77-22
ERA85-009	RD5.6ESB2
HZS9.1NB2	RD15ES-B2
MTZJ-13B	RD39ES-B2
MTZJ-33B	RD5.6ESB2
MTZJ-3.6A	1SS119-25
MTZJ-4.7C	1SS133T-77

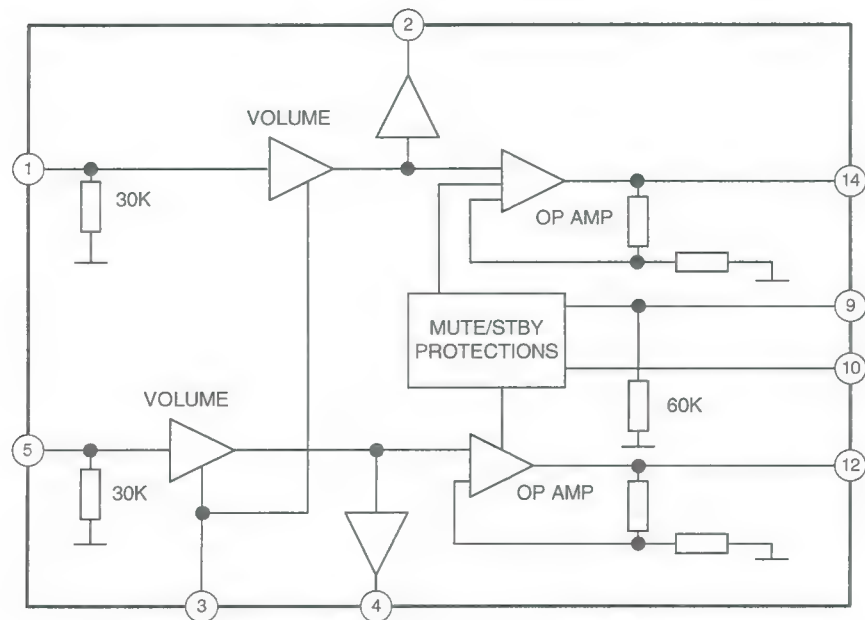


## 5-5 IC BLOCK DIAGRAMS

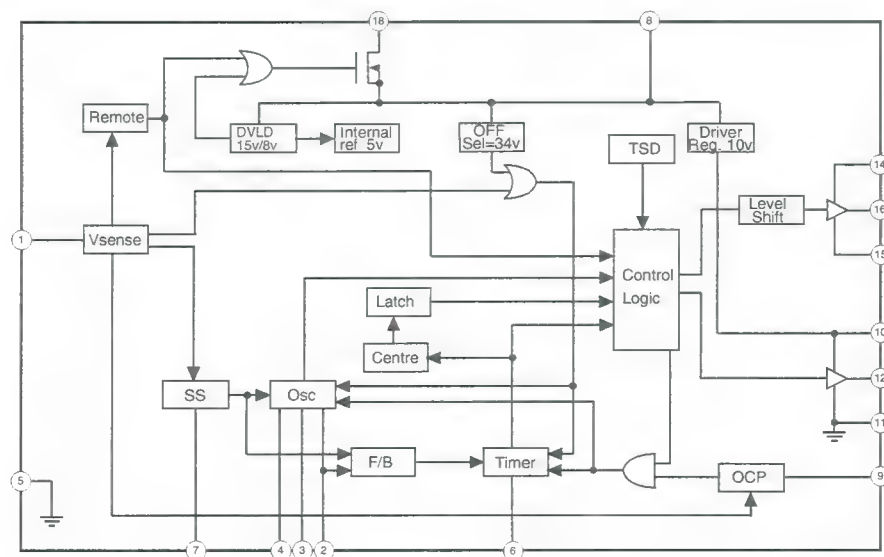
A BOARD IC6202/IC6205 BA033T/BA12T



A BOARD IC2500 TDA7497

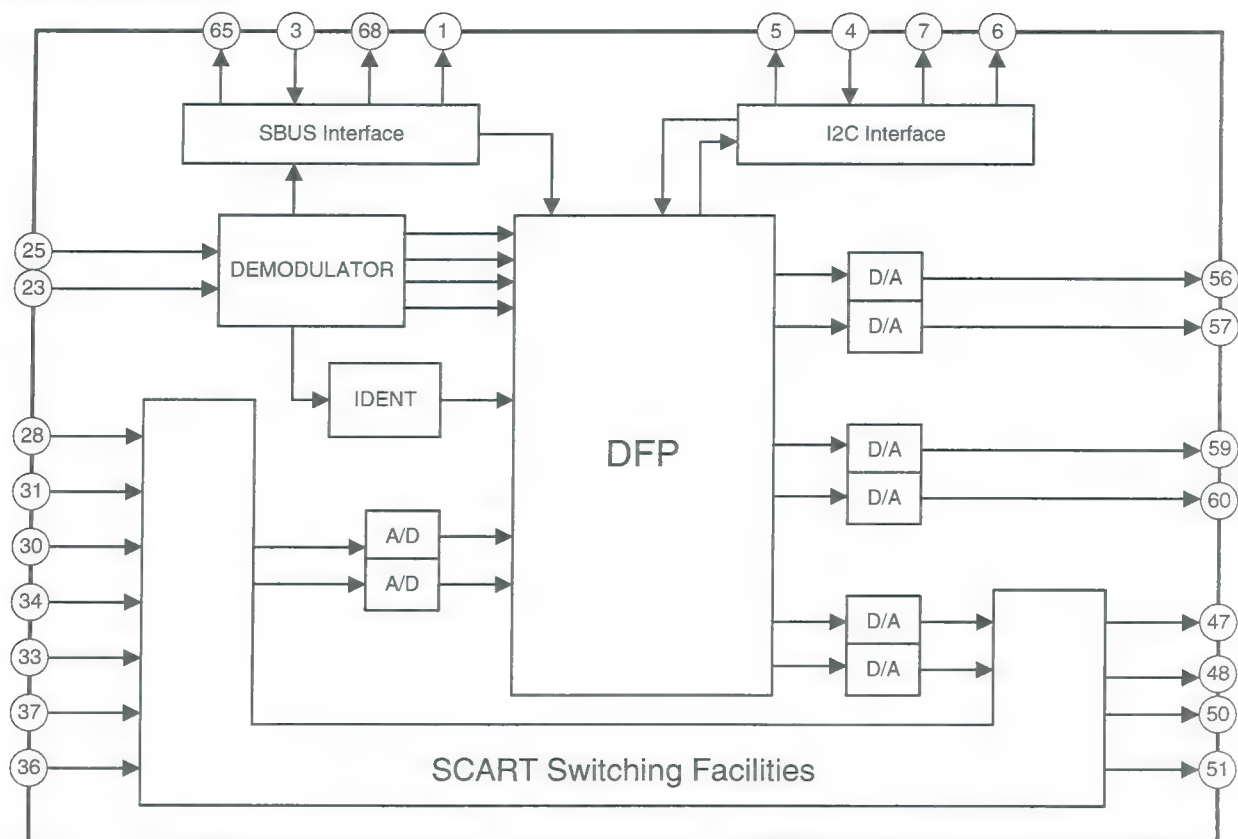


G BOARD IC6001 MCZ3001D

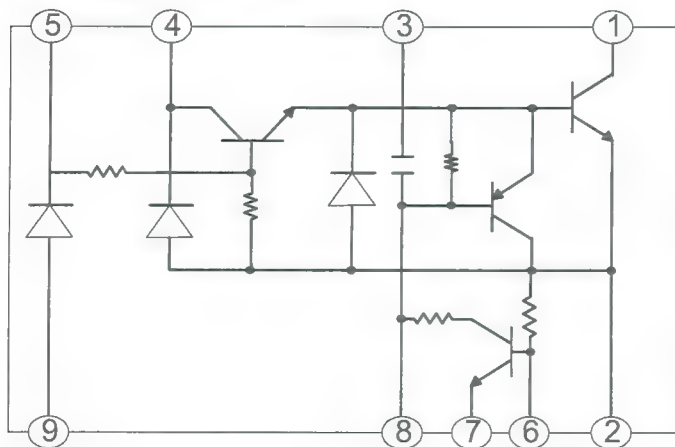




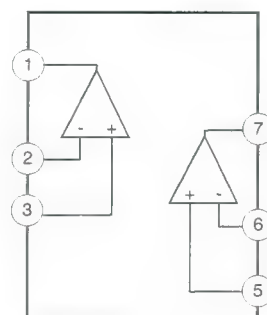
**A BOARD IC2000 MSP3411G**



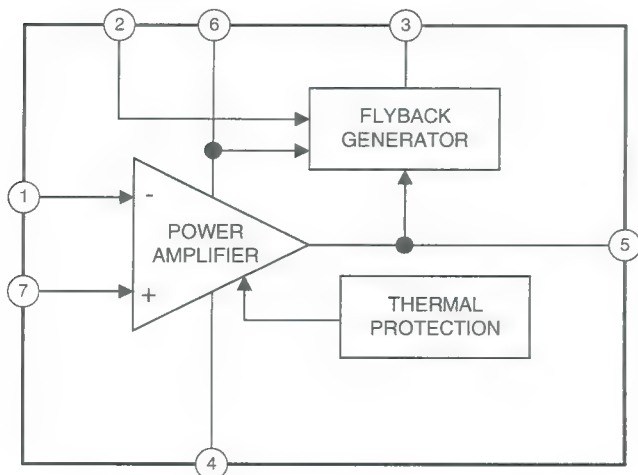
**G BOARD IC6003 SE135N-LF4**



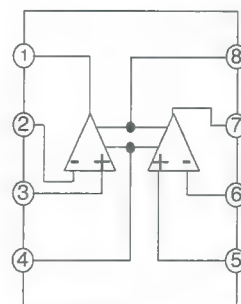
**A BOARD IC5301/IC5302 LA6393DLL**



**A BOARD IC5400 STV9379**



**A BOARD IC5300 LM358N**



## SECTION 6 EXPLODED VIEWS

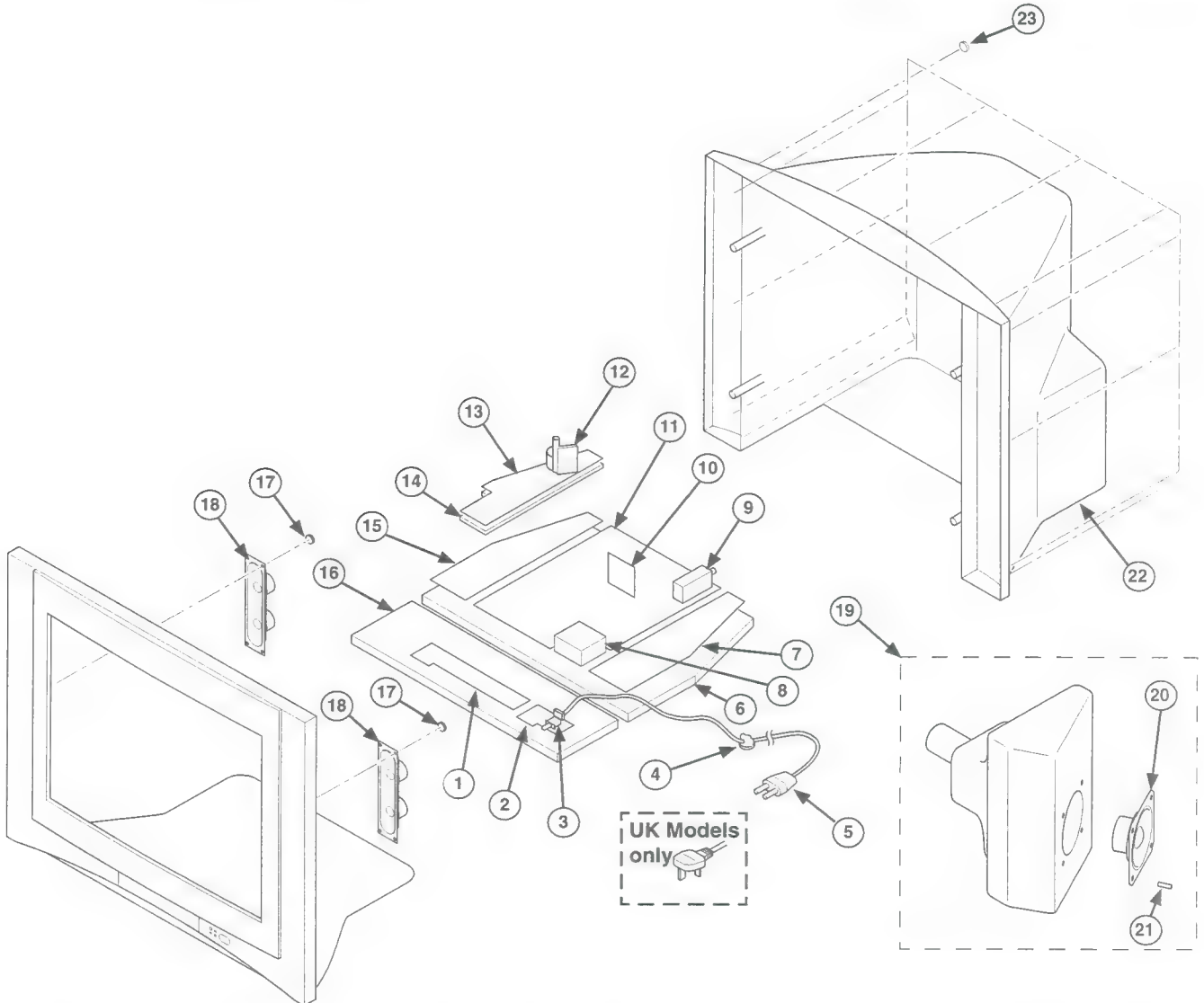
### NOTE :

- Items with no part number and no description are not stocked because they are seldom required for routine service.
- The construction parts of an assembled part are indicated with a collation number in the remarks column.
- Items marked "\*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

### 6-1. CHASSIS

Note : Les composants identifiés par une trame et par une marque Δ sont d'une importance critique pour la sécurité. Ne les remplacer que par des pièces du numéro spécifié.

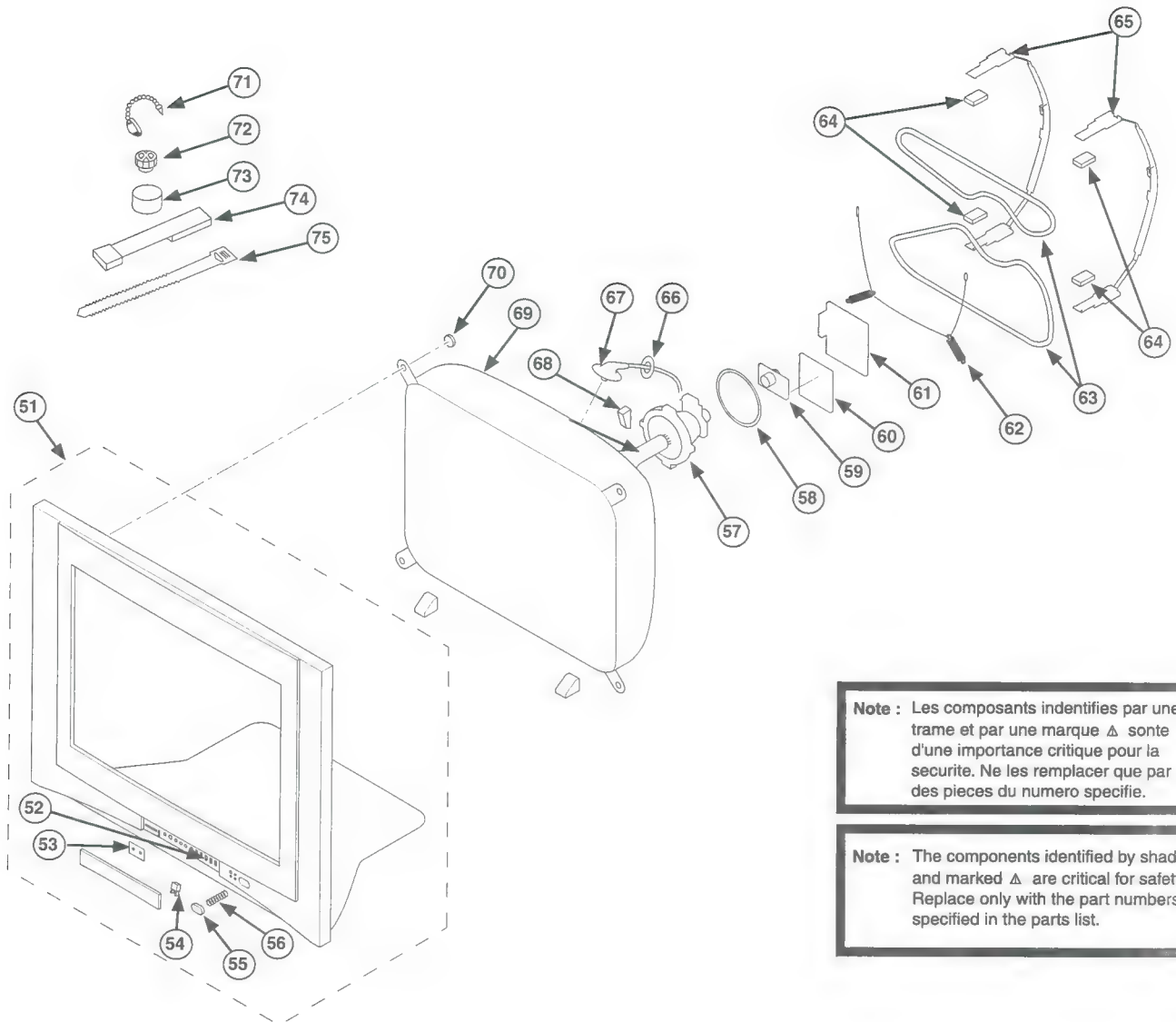
Note : The components identified by shading and marked Δ are critical for safety. Replace only with the part numbers specified in the parts list.



REF.NO.	PART.NO	DESCRIPTION	REMARK	REF.NO.	PART.NO	DESCRIPTION	REMARK
1	*A-1302-135-A	H1 BOARD, COMPLETE		11	*A-1300-172-A	A BOARD, COMPLETE (KV-32FQ70E/32FQ70K)	
2	*A-1302-134-A	F1 BOARD, COMPLETE			*A-1300-580-A	A BOARD, COMPLETE (KV-32FQ70U)	
3	£ 1-571-433-21	SWITCH, PUSH (AC POWER)		12	£ 1-453-444-11	TRANSFORMER ASSY, FLYBACK (NX-6020//Z2B4)	
4	*4-202-531-01	AC CORD LOCK (SC)		13	*A-1300-514-A	D2 BOARD, COMPLETE	
5	£ 1-823-853-11	CORD, POWER (KV-32FQ70B/32FQ70E/32FQ70K)		14	*4-087-469-01	BRACKET, D2	
	£ 1-776-860-11	POWER CORD, FILTER (UK) (KV-32FQ70U)		15	*A-1300-174-A	D BOARD, COMPLETE	
6	*4-206-106-61	BRACKET, MAIN		16	*4-093-898-01	BRACKET, H	
7	*A-1300-173-A	G BOARD, COMPLETE		17	4-058-870-01	SCREW +BVTP 3x16 TYPE 2 IT-3	
8	1-424-855-11	COIL, CHOKE 29MMH		18	1-529-408-11	SPEAKER (4.2x24CM)	
9	8-598-535-20	FRONTEND BTF-EF411 (KV-32FQ70B)		19	*A-1603-084-A	WOOFER COMPLETE ASSY	20-21
	8-598-533-10	FRONTEND BTF-EC411 (KV-32FQ70E/32FQ70K)		20	1-529-417-11	SPEAKER (8CM)	
	8-598-529-10	FRONTEND BTF-EU611 (KV-32FQ70U)		21	7-685-663-71	SCREW +BVTP 4x16 TYPE 2 IT-3	
10	*A-1404-964-A	M2 BOARD, COMPLETE		22	*4-093-896-01	REAR COVER	
11	*A-1300-579-A	A BOARD, COMPLETE (KV-32FQ70B)		23	7-685-648-79	SCREW (4x16), W(+) P TAPPING	



## 6-2. PICTURE TUBE



REF.NO.	PART.NO	DESCRIPTION	REMARK	REF.NO.	PART.NO	DESCRIPTION	REMARK
51	*X-4041-364-1	BEZNET ASSY	52-56	64	4-203-390-11	CUSHION, DGC	
52	*4-087-533-01	MULTIBUTTON		65	*4-204-768-01	HOLDER, DGC	
53	4-087-530-01	GUIDE, LIGHT		66	*4-203-022-01	HOLDER, HV	
54	4-085-507-03	SPRING, DOOR		67	£ 1-251-374-33	CAP ASSY, HIGH-VOLTAGE	
55	4-087-527-01	POWER BUTTON		68	3-704-495-01	SPACER, DY	
56	4-204-426-01	SPRING		69	£ 8-735-079-05	PICTURE TUBE (W76LLZ060X)	
57	£ 1-451-480-22	DEFLECTION YOKE (Y32RVC2)		70	4-046-765-12	SCREW, TAPPING 7+CROWN WASHER	
58	1-419-363-11	COIL, NA ROTATION		71	4-308-870-00	CLIP, LEAD WIRE	
59	£ 8-453-011-11	NECK ASSY, (NA299-M)		72	1-452-094-00	MAGNET, ROTATABLE DISK; 15MM	
60	*A-1300-627-A	VM BOARD, COMPLETE		73	1-452-032-00	MAGNET, DISK; 10MM	
61	*A-1302-133-A	C BOARD, COMPLETE		74	X-4387-214-1	PERMALLOY ASSY, CORRECTION	
62	4-369-318-21	SPRING, TENSION		75	3-701-007-00	BAND, BINDING	
63	£ 1-424-888-11	COIL, DEGAUSSING					

## SECTION 7 ELECTRICAL PARTS LIST

### PARTS LISTING TABLE OF CONTENTS

	<u>Page</u>
<b>G BOARD COMPLETE Parts List :</b> .....	56
<b>D BOARD COMPLETE Parts List :</b> .....	57
<b>D2 BOARD COMPLETE Parts List :</b> .....	60
<b>A BOARD COMMON Parts List :</b> Parts common to all models in this manual .....	62
<b>A BOARD VARIANT Parts List :</b> Parts that belong only to the model specified	
<u>Model</u>	
(KV-32FQ70B) : .....	71
(KV-32FQ70E) : .....	71
(KV-32FQ70K) : .....	71
(KV-32FQ70U) : .....	71
<b>C BOARD COMPLETE Parts List :</b> .....	71
<b>F1 BOARD COMPLETE Parts List :</b> .....	72
<b>H1 BOARD COMPLETE Parts List :</b> .....	73
<b>M2 BOARD COMPLETE Parts List :</b> .....	73
<b>VM BOARD COMPLETE Parts List :</b> .....	75
<b>MISCELLANEOUS :</b> .....	77
<b>ACCESSORIES AND PACKAGING MATERIALS :</b> .....	77
<b>REMOTE COMMANDER :</b> .....	77

**Note :** Refer to the designated variant parts list when seeking a part indicated by an asterisk (\*)  
Parts indicated (XX) on the Schematic Diagram are not used in this model and  
therefore do not appear in the Parts List.



**Note :** The components identified by shading and marked  $\Delta$  are critical for safety. Replace only with the part numbers specified in the parts list.

**G**

REF.NO.	PART.NO	DESCRIPTION	REMARK	REF.NO.	PART.NO	DESCRIPTION	REMARK
<b>* A-1300-173-A G Board, Complete</b>				< CONNECTOR >			
	4-382-854-01	SCREW (M3X8), P, SW (+)		CN6001	£ * 1-691-291-11	PIN, CONNECTOR (PC BOARD) 5P	
	4-382-854-01	SCREW (M3X8), P, SW (+)		CN6002	£ * 1-508-786-00	PIN, CONNECTOR (5MM PITCH) 2P	
< CAPACITOR >				CN6003	£ * 1-508-765-00	PIN, CONNECTOR (5MM PITCH) 3P	
				CN6004	£ * 1-691-960-11	PIN, CONNECTOR (PC BOARD) 3P	
				CN6005	* 1-817-037-61	PLUG, CONNECTOR 6P	
C6001	£ 1-137-999-11	FILM 0.1UF	275V	CN6006	* 1-564-516-11	PLUG, CONNECTOR 13P	
C6002	£ 1-137-999-11	FILM 0.1UF	275V	CN6008	* 1-564-507-11	PLUG, CONNECTOR 4P	
C6003	£ 1-119-899-51	CERAMIC 1000PF	10.00% 250V	CN6010	* 1-564-511-11	PLUG, CONNECTOR 8P	
C6004	£ 1-119-899-51	CERAMIC 1000PF	10.00% 250V	< DIODE >			
C6005	1-126-965-91	ELECT 22UF	20.00% 50V	D6001	6-500-067-01	DIODE GSIB460L/45	
C6006	1-117-753-11	ELECT(BLOCK) 470UF	20.00% 450V	D6002	8-719-982-26	DIODE MYZJ-33B	
C6007	1-126-964-11	ELECT 10UF	20.00% 50V	D6004	8-719-979-64	DIODE UF4005PKG23	
C6008	1-126-963-11	ELECT 4.7UF	20.00% 50V	D6006	8-719-081-97	DIODE MMDL914T1	
C6010	1-136-165-00	FILM 0.1UF	5.00% 50V	D6007	8-719-081-97	DIODE MMDL914T1	
C6011	1-162-964-11	CERAMIC CHIP 0.001UF	10.00% 50V	D6008	8-719-063-70	DIODE D1NL20U	
C6012	£ 1-104-571-91	CERAMIC 0.0015UF	10.00% 2KV	D6009	8-719-110-41	DIODE RD15ESB2	
C6013	£ 1-104-571-91	CERAMIC 0.0015UF	10.00% 2KV	D6010	8-719-085-24	DIODE FBIU4D7M1-B	
C6014	1-113-610-11	ELECT(BLOCK) 220UF	20% 250V	D6011	8-719-033-12	DIODE S3L40F	
C6015	1-115-339-11	CERAMIC CHIP 0.1UF	10.00% 50V	D6012	8-719-033-12	DIODE S3L40F	
C6016	1-104-571-91	CERAMIC 0.0015UF	10.00% 2KV	D6016	8-719-060-88	DIODE D4SBS6	
C6017	1-104-571-91	CERAMIC 0.0015UF	10.00% 2KV	D6031	8-719-080-59	DIODE EK19-V0	
C6018	1-126-949-11	ELECT 220UF	20.00% 35V	D6032	8-719-080-59	DIODE EK19-V0	
C6020	1-135-946-22	FILM 47000PF	3% 800V	D6033	8-719-022-97	DIODE D2S4MF	
C6021	1-164-645-11	CERAMIC 1000PF	10.00% 500V	D6034	8-719-022-97	DIODE D2S4MF	
C6022	1-126-963-11	ELECT 4.7UF	20.00% 50V	D6035	1-535-303-00	LEAD, JUMPER (5.0MM)	
C6023	1-110-626-11	ELECT 330UF	20.00% 160V	D6036	1-216-295-91	SHORT CHIP 0	
C6024	1-164-625-11	CERAMIC 680PF	10.00% 500V	D6101	8-719-081-97	DIODE MMDL914T1	
C6025	1-164-625-11	CERAMIC 680PF	10.00% 500V	D6102	8-719-511-40	DIODE S1VB40	
C6026	1-164-625-11	CERAMIC 680PF	10.00% 500V	D6103	8-719-081-97	DIODE MMDL914T1	
C6027	1-164-625-11	CERAMIC 680PF	10.00% 500V	D6104	8-719-081-97	DIODE MMDL914T1	
C6028	1-128-548-11	ELECT 4700UF	20.00% 25V	D6105	8-719-081-97	DIODE MMDL914T1	
C6029	1-126-939-11	ELECT 10000UF	20.00% 16V	D6106	8-719-081-97	DIODE MMDL914T1	
C6030	1-119-940-51	ELECT 4700UF	20.00% 50V	D6107	8-719-081-97	DIODE MMDL914T1	
C6031	1-535-143-71	LEAD, JUMPER (7.5MM)		< FERRITE BEAD >			
C6032	£ 1-113-927-11	CERAMIC 0.01UF	250V	FB6001	1-410-397-21	FERRITE 1.1UH	
C6033	1-162-964-11	CERAMIC CHIP 0.001UF	10.00% 50V	FB6002	1-410-397-21	FERRITE 1.1UH	
C6034	1-162-968-11	CERAMIC CHIP 0.0047UF	10.00% 50V	FB6003	1-410-397-21	FERRITE 1.1UH	
C6035	1-136-165-00	FILM 0.1UF	5.00% 50V	FB6004	1-410-397-21	FERRITE 1.1UH	
C6036	1-136-479-11	FILM 0.001UF	5.00% 100V	FB6005	1-535-303-00	LEAD, JUMPER (5.0MM)	
C6037	1-126-947-11	ELECT 47UF	20.00% 35V	FB6006	1-535-303-00	LEAD, JUMPER (5.0MM)	
C6038	1-164-645-11	CERAMIC 1000PF	10.00% 500V	< IC >			
C6039	1-125-891-11	CERAMIC CHIP 0.47UF	10.00% 10V	IC6001	8-759-670-30	IC MCZ3001D	
C6040	1-115-340-11	CERAMIC CHIP 0.22UF	10.00% 25V	IC6003	8-749-016-19	IC SE135N-LF4	
C6045	1-115-339-11	CERAMIC CHIP 0.1UF	10.00% 50V				
C6102	1-126-943-11	ELECT 2200UF	20.00% 25V				
C6103	1-126-971-11	ELECT 470UF	20.00% 50V				
C6105	1-126-964-11	ELECT 10UF	20.00% 50V				
C6106	1-126-964-11	ELECT 10UF	20.00% 50V				

**Note :** The components identified by shading and marked  $\Delta$  are critical for safety. Replace only with the part numbers specified in the parts list.

**G**

**D**

REF.NO.	PART.NO	DESCRIPTION	REMARK	REF.NO.	PART.NO	DESCRIPTION	REMARK
< COIL >				R6032	1-249-417-11	CARBON 1K 5%	1/4W
L6001	1-406-663-21	INDUCTOR 47UH		R6033	1-215-481-00	METAL 330K 1%	1/4W
L6002	1-412-527-11	INDUCTOR 15UH		R6034	1-249-389-11	CARBON 4.7 5%	1/4W
L6003	1-412-527-11	INDUCTOR 15UH		R6035	1-260-083-11	CARBON 47 5%	1/2W
L6004	1-535-303-00	LEAD, JUMPER (5.0MM)		R6036	1-216-817-11	METAL CHIP 470 5%	1/10W
L6005	1-535-303-00	LEAD, JUMPER (5.0MM)		R6037	1-249-405-11	CARBON 100 5%	1/4W
L6006	1-406-659-11	INDUCTOR 10UH		R6038	1-208-830-11	METAL CHIP 100K 0.5%	1/10W
L6007	1-412-525-31	INDUCTOR 10UH		R6039	1-208-830-11	METAL CHIP 100K 0.5%	1/10W
L6008	1-406-670-11	INDUCTOR 680UH		R6040	1-208-814-91	METAL CHIP 22K 0.5%	1/10W
< PHOTOCOUPLER >				R6042	1-216-295-91	SHORT CHIP 0	
PH6001	8-749-016-21	IC TCET1103G		R6045	1-216-639-11	METAL CHIP 330 0.5%	1/10W
< TRANSISTOR >				R6047	1-216-681-11	METAL CHIP 18K 0.5%	1/10W
Q6003	8-729-010-29	TRANSISTOR MSD601-RST1		R6048	1-215-481-00	METAL 330K 1%	1/4W
Q6005	8-729-029-56	TRANSISTOR DTA144ESA		R6049	1-208-805-11	METAL CHIP 9.1K 0.5%	1/10W
Q6006	6-550-146-01	TRANSISTOR SPA07N60C2-E8152		R6050	1-208-758-11	METAL CHIP 100 0.5%	1/10W
Q6007	6-550-146-01	TRANSISTOR SPA07N60C2-E8152		R6054	1-216-615-11	METAL CHIP 33 0.5%	1/10W
Q6010	8-729-119-78	TRANSISTOR 2SC2785-HFE		R6056	1-216-295-91	SHORT CHIP 0	
Q6101	8-729-029-56	TRANSISTOR DTA144ESA		R6057	1-208-798-11	METAL CHIP 4.7K 0.5%	1/10W
Q6102	8-729-010-29	TRANSISTOR MSD601-RST1		R6101	1-216-821-11	METAL CHIP 1K 5%	1/10W
Q6103	8-729-029-56	TRANSISTOR DTA144ESA		R6102	1-216-829-11	METAL CHIP 4.7K 5%	1/10W
Q6104	8-729-010-29	TRANSISTOR MSD601-RST1		R6103	1-216-821-11	METAL CHIP 1K 5%	1/10W
Q6105	8-729-010-29	TRANSISTOR MSD601-RST1		R6104	1-216-821-11	METAL CHIP 1K 5%	1/10W
< RESISTOR >				R6105	1-216-821-11	METAL CHIP 1K 5%	1/10W
JR6004	1-216-295-91	SHORT CHIP 0		R6106	1-216-829-11	METAL CHIP 4.7K 5%	1/10W
R6003	1-202-933-61	FUSIBLE 0.1 10%	1/2W	R6107	1-216-829-11	METAL CHIP 4.7K 5%	1/10W
R6004	1-205-998-11	CEMENTED 1 5%	10W	R6108	1-216-821-11	METAL CHIP 1K 5%	1/10W
R6005	1-205-998-11	CEMENTED 1 5%	10W	R6109	1-216-829-11	METAL CHIP 4.7K 5%	1/10W
R6006	1-205-998-11	CEMENTED 1 5%	10W	R6110	1-216-821-11	METAL CHIP 1K 5%	1/10W
R6007	1-243-979-21	METAL OXIDE 0.1 5%	2W	< RELAY >			
R6008	1-243-979-21	METAL OXIDE 0.1 5%	2W	RY6001	1-755-395-11	RELAY (AC POWER)	
R6009	1-216-687-11	METAL CHIP 33K 0.5%	1/10W	RY6002	1-755-389-11	RELAY (AC POWER)	
R6010	1-215-481-00	METAL 330K 1%	1/4W	< TRANSFORMER >			
R6013	1-218-265-11	METAL 8.2M 5%	1W	T6002	1-437-850-12	(PIT) CONVERTER TRANSFORMER	
R6014	1-215-926-00	METAL OXIDE 33K 5%	3W	T6003	1-424-896-11	TRANSFORMER, LINE FILTER	
R6015	1-208-757-11	METAL CHIP 91 0.5%	1/10W	T6101	1-437-483-11	TRANSFORMER, STANDBY	
R6016	1-216-821-11	METAL CHIP 1K 5%	1/10W	< THERMISTOR >			
R6017	1-216-833-11	METAL CHIP 10K 5%	1/10W	TH6002	1-804-650-11	THERMISTOR, POSITIVE	
R6018	1-260-131-11	CARBON 470K 5%	1/2W	<b>* A-1300-174-A D Board, Complete</b>			
R6019	1-260-130-81	CARBON 390K 5%	1/2W	4-382-854-01	SCREW (M3X8), P, SW (+)		
R6020	1-216-820-11	METAL CHIP 820 5%	1/10W	< CAPACITOR >			
R6021	1-216-362-11	METAL OXIDE 0.27 5%	2W	C8100	1-136-165-00	FILM 0.1UF 5.00%	50V
R6022	1-216-833-11	METAL CHIP 10K 5%	1/10W	C8101	1-136-165-00	FILM 0.1UF 5.00%	50V
R6024	1-216-615-11	METAL CHIP 33 0.5%	1/10W	C8102	1-136-165-00	FILM 0.1UF 5.00%	50V
R6029	1-216-833-11	METAL CHIP 10K 5%	1/10W	C8103	1-115-416-11	CERAMIC CHIP 0.001UF 5.00%	25V
R6030	1-216-817-11	METAL CHIP 470 5%	1/10W				



REF.NO.	PART.NO	DESCRIPTION	REMARK	REF.NO.	PART.NO	DESCRIPTION	REMARK
C8104	1-115-416-11	CERAMIC CHIP 0.001UF	5.00% 25V	C8831	1-102-228-00	CERAMIC 470PF	10.00% 500V
C8105	1-126-947-11	ELECT 47UF	20.00% 35V	C8832	1-126-941-11	ELECT 470UF	20.00% 25V
C8106	1-164-315-11	CERAMIC CHIP 470PF	5.00% 50V	C8833	1-126-941-11	ELECT 470UF	20.00% 25V
C8107	1-216-685-11	METAL CHIP 27K	0.5% 1/10W	C8834	1-102-228-00	CERAMIC 470PF	10.00% 500V
C8108	1-162-970-11	CERAMIC CHIP 0.01UF	10.00% 25V	C8835	1-102-228-00	CERAMIC 470PF	10.00% 500V
C8109	1-126-947-11	ELECT 47UF	20.00% 35V	C8836	1-123-024-21	ELECT 33UF	160V
C8112	1-164-227-11	CERAMIC CHIP 0.022UF	10.00% 25V	C8841	1-126-947-11	ELECT 47UF	20.00% 35V
C8113	1-162-970-11	CERAMIC CHIP 0.01UF	10.00% 25V	C8844	1-115-513-21	FILM 0.18UF	5.00% 250V
C8114	1-126-964-11	ELECT 10UF	20.00% 50V	C8860	1-162-964-11	CERAMIC CHIP 0.001UF	10.00% 50V
C8115	1-162-962-11	CERAMIC CHIP 470PF	10.00% 50V	C8861	1-162-927-11	CERAMIC CHIP 100PF	5.00% 50V
C8116	1-115-416-11	CERAMIC CHIP 0.001UF	5.00% 25V	< CONNECTOR >			
C8117	1-115-416-11	CERAMIC CHIP 0.001UF	5.00% 25V	CN8600	* 1-817-037-61	PLUG, CONNECTOR 6P	
C8118	1-162-970-11	CERAMIC CHIP 0.01UF	10.00% 25V	CN8601	* 1-816-980-71	PLUG, CONNECTOR 3P	
C8119	1-107-826-11	CERAMIC CHIP 0.1UF	10.00% 16V	CN8611	* 1-785-270-12	PIN, DY CONNECTOR (PC BOARD)	
C8124	1-125-891-11	CERAMIC CHIP 0.47UF	10.00% 10V	CN8612	* 1-816-979-51	PLUG, CONNECTOR 8P	
C8125	1-162-968-11	CERAMIC CHIP 0.0047UF	10.00% 50V	CN8614	* 1-564-508-11	PLUG, CONNECTOR 5P	
C8126	1-165-176-11	CERAMIC CHIP 0.047UF	10.00% 16V	CN8616	1-695-915-11	TAB (CONTACT)	
C8128	1-162-968-11	CERAMIC CHIP 0.0047UF	10.00% 50V	CN8620	1-764-333-11	PIN, CONNECTOR(PCB) (V TYPE) 10P	
C8131	1-126-964-11	ELECT 10UF	20.00% 50V	CN8810	* 1-564-510-11	PLUG, CONNECTOR 7P	
C8132	1-164-230-11	CERAMIC CHIP 220PF	5.00% 50V	< DIODE >			
C8134	1-102-935-00	CERAMIC 2PF	0.25PF 50V	D8102	8-719-081-97	DIODE MMDL914T1	
C8135	1-126-964-11	ELECT 10UF	20.00% 50V	D8103	8-719-081-97	DIODE MMDL914T1	
C8136	1-126-964-11	ELECT 10UF	20.00% 50V	D8104	8-719-081-97	DIODE MMDL914T1	
C8209	1-164-315-11	CERAMIC CHIP 470PF	5.00% 50V	D8105	8-719-081-97	DIODE MMDL914T1	
C8210	1-162-964-11	CERAMIC CHIP 0.001UF	10.00% 50V	D8107	8-719-081-97	DIODE MMDL914T1	
C8801	1-126-947-11	ELECT 47UF	20.00% 35V	D8108	8-719-921-40	DIODE MTZJ-4.7C	
C8802	1-126-960-11	ELECT 1UF	20.00% 50V	D8128	8-719-081-97	DIODE MMDL914T1	
C8803	1-126-960-11	ELECT 1UF	20.00% 50V	D8132	8-719-081-97	DIODE MMDL914T1	
C8804	1-102-114-00	CERAMIC 470PF	10.00% 50V	D8133	8-719-081-97	DIODE MMDL914T1	
C8805	1-102-114-00	CERAMIC 470PF	10.00% 50V	D8199	8-719-081-97	DIODE MMDL914T1	
C8808	1-102-030-00	CERAMIC 330PF	10.00% 500V	D8611	8-719-081-97	DIODE MMDL914T1	
C8809	1-102-030-00	CERAMIC 330PF	10.00% 500V	D8612	8-719-081-97	DIODE MMDL914T1	
C8810	1-107-368-11	MYLAR 0.047UF	10.00% 200V	D8803	8-719-200-02	DIODE 10E-2	
C8811	1-107-368-11	MYLAR 0.047UF	10.00% 200V	D8805	8-719-302-43	DIODE EL1Z	
C8812	1-162-131-11	CERAMIC 220PF	10.00% 2KV	D8806	8-719-979-85	DIODE EGP20G	
C8813	1-162-134-11	CERAMIC 470PF	10.00% 2KV	D8807	8-719-510-73	DIODE S3L20UF4	
C8814	1-117-640-11	FILM 6800PF	3.00% 1.2KV	D8808	8-719-510-73	DIODE S3L20UF4	
C8815	1-117-835-11	FILM 6200PF	3.00% 1.5KV	D8811	8-719-110-41	DIODE RD15ESB2	
C8816	1-162-964-11	CERAMIC CHIP 0.001UF	10.00% 50V	D8818	8-719-109-89	DIODE RD5.6ESB2	
C8817	1-125-893-11	FILM 680PF	3.00% 1.5KV	D8819	8-719-050-38	DIODE M1MA152WK-T1	
C8818	1-125-893-11	FILM 680PF	3.00% 1.5KV	D8820	8-719-081-97	DIODE MMDL914T1	
C8819	1-125-893-11	FILM 680PF	3.00% 1.5KV	D8859	8-719-081-97	DIODE MMDL914T1	
C8820	1-125-893-11	FILM 680PF	3.00% 1.5KV	D8860	8-719-110-41	DIODE RD15ESB2	
C8824	1-107-846-11	FILM 0.1UF	5.00% 400V	< FERRITE BEAD >			
C8825	1-117-662-11	FILM 0.18UF	5.00% 250V	FB8807	1-410-397-21	FERRITE 1.1UH	
C8826	1-115-519-11	FILM 0.56UF	5.00% 250V				
C8827	1-107-846-11	FILM 0.1UF	5.00% 400V				
C8828	1-127-681-11	FILM 10000PF	2% 100V				
C8829	1-127-680-11	FILM 4700PF	2% 100V				
C8830	1-107-655-11	ELECT 47UF	20.00% 250V				

REF.NO.	PART.NO	DESCRIPTION	REMARK	REF.NO.	PART.NO	DESCRIPTION	REMARK
< IC >				Q8806	8-729-047-59	TRANSISTOR STP5NB40FP	
IC8100	8-759-659-67	IC LA6393DLL		Q8807	8-729-421-19	TRANSISTOR UN2213	
IC8101	8-759-659-67	IC LA6393DLL		Q8822	8-729-010-29	TRANSISTOR MSD601-RST1	
IC8102	8-759-638-79	IC NJM3404AD-W		Q8823	8-729-424-08	TRANSISTOR UN2111	
IC8103	8-759-659-67	IC LA6393DLL		< RESISTOR >			
< COIL >				R8100	1-216-813-11	METAL CHIP 220 5% 1/10W	
L8801	1-410-397-21	FERRITE 1.1UH		R8101	1-216-813-11	METAL CHIP 220 5% 1/10W	
L8802	1-410-397-21	FERRITE 1.1UH		R8102	1-216-825-11	METAL CHIP 2.2K 5% 1/10W	
L8803	1-410-397-21	FERRITE 1.1UH		R8103	1-216-825-11	METAL CHIP 2.2K 5% 1/10W	
< INDUCTOR >				R8104	1-216-825-11	METAL CHIP 2.2K 5% 1/10W	
LF8801	1-406-985-11	INDUCTOR 2.2MH		R8105	1-216-821-11	METAL CHIP 1K 5% 1/10W	
< TRANSISTOR >				R8106	1-216-825-11	METAL CHIP 2.2K 5% 1/10W	
Q8100	8-729-010-29	TRANSISTOR MSD601-RST1		R8107	1-208-792-11	METAL CHIP 2.7K 0.5% 1/10W	
Q8101	8-729-010-29	TRANSISTOR MSD601-RST1		R8108	1-208-792-11	METAL CHIP 2.7K 0.5% 1/10W	
Q8102	8-729-010-29	TRANSISTOR MSD601-RST1		R8109	1-208-814-91	METAL CHIP 22K 0.5% 1/10W	
Q8103	8-729-010-29	TRANSISTOR MSD601-RST1		R8110	1-208-814-91	METAL CHIP 22K 0.5% 1/10W	
Q8104	8-729-010-29	TRANSISTOR MSD601-RST1		R8111	1-216-825-11	METAL CHIP 2.2K 5% 1/10W	
Q8105	8-729-010-29	TRANSISTOR MSD601-RST1		R8112	1-216-825-11	METAL CHIP 2.2K 5% 1/10W	
Q8106	8-729-010-29	TRANSISTOR MSD601-RST1		R8113	1-216-833-11	METAL CHIP 10K 5% 1/10W	
Q8107	8-729-010-29	TRANSISTOR MSD601-RST1		R8114	1-216-833-11	METAL CHIP 10K 5% 1/10W	
Q8108	8-729-010-05	TRANSISTOR MSB709-RT1		R8115	1-216-845-11	METAL CHIP 100K 5% 1/10W	
Q8110	8-729-010-05	TRANSISTOR MSB709-RT1		R8116	1-216-845-11	METAL CHIP 100K 5% 1/10W	
Q8112	8-729-010-29	TRANSISTOR MSD601-RST1		R8117	1-216-833-11	METAL CHIP 10K 5% 1/10W	
Q8113	8-729-010-29	TRANSISTOR MSD601-RST1		R8118	1-216-833-11	METAL CHIP 10K 5% 1/10W	
Q8115	8-729-010-05	TRANSISTOR MSB709-RT1		R8119	1-216-833-11	METAL CHIP 10K 5% 1/10W	
Q8118	8-729-010-29	TRANSISTOR MSD601-RST1		R8120	1-216-825-11	METAL CHIP 2.2K 5% 1/10W	
Q8119	8-729-010-05	TRANSISTOR MSB709-RT1		R8121	1-216-825-11	METAL CHIP 2.2K 5% 1/10W	
Q8120	8-729-010-05	TRANSISTOR MSB709-RT1		R8122	1-216-825-11	METAL CHIP 2.2K 5% 1/10W	
Q8122	8-729-010-05	TRANSISTOR MSB709-RT1		R8123	1-216-841-11	METAL CHIP 47K 5% 1/10W	
Q8123	8-729-010-05	TRANSISTOR MSB709-RT1		R8124	1-216-821-11	METAL CHIP 1K 5% 1/10W	
Q8125	8-729-010-29	TRANSISTOR MSD601-RST1		R8125	1-216-825-11	METAL CHIP 2.2K 5% 1/10W	
Q8126	8-729-010-05	TRANSISTOR MSB709-RT1		R8126	1-216-815-11	METAL CHIP 330 5% 1/10W	
Q8127	8-729-010-05	TRANSISTOR MSB709-RT1		R8127	1-208-802-11	METAL CHIP 6.8K 0.5% 1/10W	
Q8128	8-729-010-29	TRANSISTOR MSD601-RST1		R8128	1-208-822-11	METAL CHIP 47K 0.5% 1/10W	
Q8132	8-729-421-19	TRANSISTOR UN2213		R8129	1-208-822-11	METAL CHIP 47K 0.5% 1/10W	
Q8135	8-729-010-29	TRANSISTOR MSD601-RST1		R8130	1-208-846-11	METAL CHIP 470K 0.5% 1/10W	
Q8136	8-729-010-05	TRANSISTOR MSB709-RT1		R8131	1-216-815-11	METAL CHIP 330 5% 1/10W	
Q8137	8-729-010-29	TRANSISTOR MSD601-RST1		R8132	1-216-815-11	METAL CHIP 330 5% 1/10W	
Q8201	8-729-010-29	TRANSISTOR MSD601-RST1		R8133	1-216-815-11	METAL CHIP 330 5% 1/10W	
Q8202	8-729-010-29	TRANSISTOR MSD601-RST1		R8136	1-208-822-11	METAL CHIP 47K 0.5% 1/10W	
Q8455	8-729-010-29	TRANSISTOR MSD601-RST1		R8137	1-208-822-11	METAL CHIP 47K 0.5% 1/10W	
Q8801	8-729-048-47	TRANSISTOR 2SC2688(5)-LK		R8138	1-208-822-11	METAL CHIP 47K 0.5% 1/10W	
Q8802	8-729-048-47	TRANSISTOR 2SC2688(5)-LK		R8139	1-208-822-11	METAL CHIP 47K 0.5% 1/10W	
Q8803	8-729-056-16	TRANSISTOR 2SC5698-SONY-CA		R8140	1-216-825-11	METAL CHIP 2.2K 5% 1/10W	
Q8804	8-729-056-17	TRANSISTOR 2SC5696-SONY-CA		R8141	1-208-818-11	METAL CHIP 33K 0.5% 1/10W	
Q8805	8-729-050-48	TRANSISTOR IRF614-005		R8142	1-208-798-11	METAL CHIP 4.7K 0.5% 1/10W	
				R8143	1-216-825-11	METAL CHIP 2.2K 5% 1/10W	
				R8145	1-216-825-11	METAL CHIP 2.2K 5% 1/10W	
				R8146	1-208-790-11	METAL CHIP 2.2K 0.5% 1/10W	



REF.NO.	PART.NO	DESCRIPTION	REMARK			REF.NO.	PART.NO	DESCRIPTION	REMARK		
R8149	1-216-828-11	METAL CHIP	3.9K	5%	1/10W	R8808	1-260-340-11	CARBON	10K	5%	1/2W
R8150	1-218-867-11	METAL CHIP	6.8K	0.5%	1/10W	R8809	1-260-340-11	CARBON	10K	5%	1/2W
R8153	1-216-295-91	SHORT CHIP	0			R8810	1-216-460-11	METAL OXIDE	3.9K	5%	2W
R8154	1-208-784-11	METAL CHIP	1.2K	0.5%	1/10W	R8811	1-215-896-00	METAL OXIDE	4.7K	5%	2W
R8155	1-216-059-00	RES-CHIP	2.7K	5%	1/10W	R8812	1-215-896-00	METAL OXIDE	4.7K	5%	2W
R8158	1-208-798-11	METAL CHIP	4.7K	0.5%	1/10W	R8813	1-215-895-11	METAL OXIDE	3.3K	5%	2W
R8159	1-216-295-91	SHORT CHIP	0			R8814	1-215-880-00	METAL OXIDE	10	5%	2W
R8160	1-216-295-91	SHORT CHIP	0			R8815	1-215-880-00	METAL OXIDE	10	5%	2W
R8161	1-208-804-11	METAL CHIP	8.2K	0.5%	1/10W	R8816	1-216-365-00	METAL OXIDE	0.47	5%	2W
R8162	1-216-821-11	METAL CHIP	1K	5%	1/10W	R8817	1-216-361-00	METAL OXIDE	0.22	5%	2W
R8163	1-216-833-11	METAL CHIP	10K	5%	1/10W	R8818	1-249-405-11	CARBON	100	5%	1/4W
R8164	1-208-814-91	METAL CHIP	22K	0.5%	1/10W	R8819	1-247-807-31	CARBON	100	5%	1/4W
R8165	1-208-830-11	METAL CHIP	100K	0.5%	1/10W	R8831	1-260-124-11	CARBON	120K	5%	1/2W
R8168	1-216-829-11	METAL CHIP	4.7K	5%	1/10W	R8833	1-202-972-61	FUSIBLE	1	5%	1/4W
R8169	1-208-830-11	METAL CHIP	100K	0.5%	1/10W	R8834	1-260-288-11	CARBON	0.47	5%	1/2W
R8170	1-216-815-11	METAL CHIP	330	5%	1/10W	R8835	1-260-288-11	CARBON	0.47	5%	1/2W
R8171	1-216-825-11	METAL CHIP	2.2K	5%	1/10W	R8842	1-260-328-11	CARBON	1K	5%	1/2W
R8174	1-216-837-11	METAL CHIP	22K	5%	1/10W	R8844	1-216-838-11	METAL CHIP	27K	5%	1/10W
R8175	1-218-867-11	METAL CHIP	6.8K	0.5%	1/10W	R8845	1-216-833-11	METAL CHIP	10K	5%	1/10W
R8176	1-216-833-11	METAL CHIP	10K	5%	1/10W	R8865	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R8177	1-216-829-11	METAL CHIP	4.7K	5%	1/10W	R8866	1-216-295-91	SHORT CHIP	0		
R8179	1-216-295-91	SHORT CHIP	0			R8867	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R8180	1-216-825-11	METAL CHIP	2.2K	5%	1/10W	R8885	1-208-854-11	METAL CHIP	1M	0.5%	1/10W
R8181	1-216-295-91	SHORT CHIP	0			R8886	1-208-834-11	METAL CHIP	150K	0.5%	1/10W
R8182	1-216-841-11	METAL CHIP	47K	5%	1/10W	R8887	1-216-841-11	METAL CHIP	47K	5%	1/10W
R8183	1-216-825-11	METAL CHIP	2.2K	5%	1/10W	R8888	1-249-441-11	CARBON	100K	5%	1/4W
R8186	1-216-827-11	METAL CHIP	3.3K	5%	1/10W	R8895	1-249-443-11	CARBON	0.47	5%	1/4W
R8188	1-216-829-11	METAL CHIP	4.7K	5%	1/10W	R8896	1-249-443-11	CARBON	0.47	5%	1/4W
R8189	1-216-818-11	METAL CHIP	560	5%	1/10W	R8897	1-215-489-00	METAL	680K	1%	1/4W
R8190	1-216-825-11	METAL CHIP	2.2K	5%	1/10W	R8898	1-215-493-00	METAL	1M	1%	1/4W
R8191	1-215-925-11	METAL OXIDE	22K	5%	3W	R8899	1-215-493-00	METAL	1M	1%	1/4W
R8196	1-249-377-11	CARBON	0.47	5%	1/4W	< TRANSFORMER >					
R8197	1-216-841-11	METAL CHIP	47K	5%	1/10W	T8801	1-437-430-11	TRANSFORMER, FERRITE (HDT)			
R8203	1-216-295-91	SHORT CHIP	0			T8802	1-437-430-11	TRANSFORMER, FERRITE (HDT)			
R8209	1-216-295-91	SHORT CHIP	0			T8806	1-437-614-11	TRANSFORMER, HORIZONTAL OUTPUT			
R8210	1-216-825-11	METAL CHIP	2.2K	5%	1/10W	* A-1300-514-A D2 Board, Complete					
R8211	1-216-833-11	METAL CHIP	10K	5%	1/10W	3-710-578-01	COVER, VOLUME, 6 MOLD				
R8212	1-216-825-11	METAL CHIP	2.2K	5%	1/10W	4-382-854-01	SCREW (M3X8), P, SW (+)				
R8215	1-208-822-11	METAL CHIP	47K	0.5%	1/10W	< CAPACITOR >					
R8216	1-208-822-11	METAL CHIP	47K	0.5%	1/10W	C6802	1-130-483-00	MYLAR	0.01UF	5.00%	50V
R8217	1-216-833-11	METAL CHIP	10K	5%	1/10W	C6803	1-165-176-11	CERAMIC CHIP	0.047UF	10.00%	16V
R8456	1-216-845-11	METAL CHIP	100K	5%	1/10W	C6804	1-136-813-11	FILM	680PF	5.00%	100V
R8457	1-216-834-11	METAL CHIP	12K	5%	1/10W	C6805	1-126-964-11	ELECT	10UF	20.00%	50V
R8458	1-216-841-11	METAL CHIP	47K	5%	1/10W	C6806	1-128-551-11	ELECT	22UF	20.00%	63V
R8459	1-216-825-11	METAL CHIP	2.2K	5%	1/10W	C6807	1-130-495-00	MYLAR	0.1UF	5.00%	50V
R8800	1-247-895-91	CARBON	470K	5%	1/4W	C6808	1-126-947-11	ELECT	47UF	20.00%	35V
R8804	1-249-408-11	CARBON	180	5%	1/4W						
R8805	1-249-408-11	CARBON	180	5%	1/4W						
R8806	1-249-411-11	CARBON	330	5%	1/4W						
R8807	1-249-411-11	CARBON	330	5%	1/4W						

REF.NO.	PART.NO	DESCRIPTION	REMARK	REF.NO.	PART.NO	DESCRIPTION	REMARK
C6809	1-162-966-11	CERAMIC CHIP 0.0022UF	10.00% 50V	D6811	8-719-911-19	DIODE 1SS119-25	
C6810	1-162-115-00	CERAMIC 330PF	10.00% 1KV	D6813	8-719-911-19	DIODE 1SS119-25	
C6811	1-162-115-00	CERAMIC 330PF	10.00% 1KV	D6814	8-719-982-21	DIODE MTZJ-30C	
C6812	1-135-946-22	FILM 47000PF	3% 800V	D6815	8-719-911-19	DIODE 1SS119-25	
C6813	1-126-967-11	ELECT 47UF	20.00% 50V	D6816	8-719-110-41	DIODE RD15ESB2	
C6814	1-126-947-11	ELECT 47UF	20.00% 35V	D6817	8-719-063-73	DIODE D1NL20U-TR	
C6815	1-130-483-00	MYLAR 0.01UF	5.00% 50V	D6820	8-719-921-63	DIODE MTZJ-7.5B	
C6816	1-126-964-11	ELECT 10UF	20.00% 50V	D6821	8-719-110-49	DIODE RD18ESB2	
C6820	1-130-495-00	MYLAR 0.1UF	5.00% 50V	D6822	8-719-063-73	DIODE D1NL20U-TR	
C6821	1-126-964-11	ELECT 10UF	20.00% 50V	D6823	8-719-911-19	DIODE 1SS119-25	
C6822	1-126-966-11	ELECT 33UF	20.00% 50V	D6824	8-719-911-19	DIODE 1SS119-25	
C6823	1-126-933-11	ELECT 100UF	20.00% 16V	D6825	8-719-911-19	DIODE 1SS119-25	
C6824	1-113-610-11	ELECT (BLOCK) 220UF	20% 250V	D6831	8-719-911-19	DIODE 1SS119-25	
C6825	1-130-495-00	MYLAR 0.1UF	5.00% 50V	D6832	8-719-911-19	DIODE 1SS119-25	
C6826	1-126-969-11	ELECT 220UF	20.00% 50V	D8919	8-719-948-45	DIODE ERA22-08	
C6827	1-137-150-11	FILM 0.01UF	5.00% 100V	D8927	8-719-991-33	DIODE 1SS133T-77	
C6834	1-162-970-11	CERAMIC CHIP 0.01UF	10.00% 25V	< FERRITE BEAD >			
C6835	1-127-715-91	CERAMIC CHIP 0.22UF	10% 16V	FB6801	1-412-911-11	FERRITE 0UH	
C6836	1-136-165-00	FILM 0.1UF	5.00% 50V	< IC >			
C6837	1-136-103-00	FILM 0.1UF	5.00% 200V	IC6800	8-759-670-30	IC MCZ3001D	
C6840	1-130-495-00	MYLAR 0.1UF	5.00% 50V	IC6801	8-759-700-07	IC NJM2903M	
C6842	1-130-471-00	MYLAR 0.001UF	5.00% 50V	IC6802	8-759-701-01	IC NJM2904M	
C6843	1-135-945-22	FILM 10000PF	3% 800V	IC6803	8-759-462-09	IC TLV431AIDBV	
C6848	1-126-963-11	ELECT 4.7UF	20.00% 50V	IC6807	8-759-586-17	IC TL1431CZ-AP	
C6849	1-162-962-11	CERAMIC CHIP 470PF	10.00% 50V	< COIL >			
C6850	1-107-826-11	CERAMIC CHIP 0.1UF	10.00% 16V	L6802	1-419-658-41	INDUCTOR 107UH	
C6852	1-162-970-11	CERAMIC CHIP 0.01UF	10.00% 25V	L8901	1-406-674-11	INDUCTOR 3.3MH	
C6853	1-126-933-11	ELECT 100UF	20.00% 16V	< TRANSISTOR >			
C8929	1-107-635-11	ELECT 4.7UF	20.00% 160V	Q6801	8-729-901-81	TRANSISTOR 2SC2412K-T-146-R	
C8930	1-129-898-00	FILM 0.0022UF	5.00% 630V	Q6802	8-729-901-81	TRANSISTOR 2SC2412K-T-146-R	
C8932	1-136-205-11	MYLAR 0.022UF	5.00% 630V	Q6803	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
C8938	1-162-131-11	CERAMIC 220PF	10.00% 2KV	Q6804	8-729-044-42	TRANSISTOR IRF1644G-LF36	
C8939	1-162-129-00	CERAMIC 150PF	10.00% 2KV	Q6805	8-729-044-42	TRANSISTOR IRF1644G-LF36	
C8944	1-137-150-11	FILM 0.01UF	5.00% 100V	Q6807	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
C8945	1-126-947-11	ELECT 47UF	20.00% 35V	Q6808	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
C8953	1-164-004-11	CERAMIC CHIP 0.1UF	10.00% 25V	Q6813	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX	
< CONNECTOR >				Q6814	8-729-900-53	TRANSISTOR DTC114EK	
CN6800	* 1-816-979-51	PLUG, CONNECTOR 8P		Q6815	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX	
CN6801	* 1-691-772-11	PLUG (MICRO CONNECTOR) 10P		Q6816	8-729-900-53	TRANSISTOR DTC114EK	
CN6803	1-695-915-11	TAB (CONTACT)		Q6817	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX	
CN6804	* 1-564-506-11	PLUG, CONNECTOR 3P		Q8909	6-550-012-01	TRANSISTOR STP5NB40 (033Y)	
< DIODE >				Q8918	1-801-806-11	TRANSISTOR DTC144EKA	
D6800	8-719-052-90	DIODE D1NL40-TA2		< RESISTOR >			
D6801	8-719-110-41	DIODE RD15ESB2		JR6814	1-216-864-11	SHORT CHIP 0	
D6802	8-719-110-41	DIODE RD15ESB2		JR6895	1-216-864-11	SHORT CHIP 0	
D6803	8-719-911-19	DIODE 1SS119-25					
D6806	8-719-109-85	DIODE RD5.1ESB2					



REF.NO.	PART.NO	DESCRIPTION	REMARK
R6801	1-216-841-11	METAL CHIP	47K 5% 1/10W
R6802	1-216-849-11	METAL CHIP	220K 5% 1/10W
R6803	1-216-829-11	METAL CHIP	4.7K 5% 1/10W
R6804	1-216-829-11	METAL CHIP	4.7K 5% 1/10W
R6805	1-215-481-00	METAL	330K 1% 1/4W
R6806	1-215-481-00	METAL	330K 1% 1/4W
R6807	1-215-481-00	METAL	330K 1% 1/4W
R6808	1-211-981-11	METAL CHIP	33 0.5% 1/10W
R6809	1-218-823-11	METAL CHIP	100 0.5% 1/10W
R6810	1-249-417-11	CARBON	1K 5% 1/4W
R6811	1-202-933-61	FUSIBLE	0.1 10% 1/2W
R6812	1-218-869-11	METAL CHIP	8.2K 0.5% 1/10W
R6813	1-249-393-11	CARBON	10 5% 1/4W
R6814	1-249-393-11	CARBON	10 5% 1/4W
R6815	1-216-833-11	METAL CHIP	10K 5% 1/10W
R6816	1-216-833-11	METAL CHIP	10K 5% 1/10W
R6817	1-243-979-21	METAL OXIDE	0.1 5% 2W
R6818	1-249-389-11	CARBON	4.7 5% 1/4W
R6820	1-216-837-11	METAL CHIP	22K 5% 1/10W
R6821	1-216-837-11	METAL CHIP	22K 5% 1/10W
R6823	1-247-843-11	CARBON	3.3K 5% 1/4W
R6825	1-218-912-11	METAL CHIP	510K 0.5% 1/10W
R6827	1-218-893-11	METAL CHIP	82K 0.5% 1/10W
R6828	1-218-895-11	METAL CHIP	100K 0.5% 1/10W
R6829	1-216-841-11	METAL CHIP	47K 5% 1/10W
R6832	1-216-841-11	METAL CHIP	47K 5% 1/10W
R6833	1-216-833-11	METAL CHIP	10K 5% 1/10W
R6834	1-216-821-11	METAL CHIP	1K 5% 1/10W
R6835	1-215-433-00	METAL	3.3K 1% 1/4W
R6836	1-215-447-00	METAL	12K 1% 1/4W
R6837	1-215-447-00	METAL	12K 1% 1/4W
R6838	1-215-447-00	METAL	12K 1% 1/4W
R6839	1-215-447-00	METAL	12K 1% 1/4W
R6840	1-535-303-00	LEAD, JUMPER (5.0MM)	
R6841	1-218-847-11	METAL CHIP	1K 0.5% 1/10W
R6843	1-218-845-11	METAL CHIP	820 0.5% 1/10W
R6844	1-218-875-11	METAL CHIP	15K 0.5% 1/10W
R6845	1-218-855-11	METAL CHIP	2.2K 0.5% 1/10W
R6846	1-218-868-11	METAL CHIP	7.5K 0.5% 1/10W
R6847	1-218-847-11	METAL CHIP	1K 0.5% 1/10W
R6848	1-216-817-11	METAL CHIP	470 5% 1/10W
R6852	1-216-845-11	METAL CHIP	100K 5% 1/10W
R6865	1-216-835-11	METAL CHIP	15K 5% 1/10W
R6867	1-216-809-11	METAL CHIP	100 5% 1/10W
R6868	1-216-797-11	METAL CHIP	10 5% 1/10W
R6869	1-216-833-11	METAL CHIP	10K 5% 1/10W
R6870	1-216-849-11	METAL CHIP	220K 5% 1/10W
R6872	1-249-377-11	CARBON	0.47 5% 1/4W
R6873	1-249-431-11	CARBON	15K 5% 1/4W
R6874	1-218-903-11	METAL CHIP	220K 0.5% 1/10W

REF.NO.	PART.NO	DESCRIPTION	REMARK
R6875	1-216-863-11	METAL CHIP	3.3M 5% 1/10W
R6876	1-215-485-00	METAL	470K 1% 1/4W
R6877	1-215-485-00	METAL	470K 1% 1/4W
R6878	1-216-821-11	METAL CHIP	1K 5% 1/10W
R6880	1-219-751-51	METAL	47K 5% 1/2W
R6881	1-219-749-51	METAL	10K 5% 1/2W
R6882	1-216-841-11	METAL CHIP	47K 5% 1/10W
R6883	1-211-985-11	METAL CHIP	47 0.5% 1/10W
R6884	1-218-874-11	METAL CHIP	13K 0.5% 1/10W
R6885	1-216-841-11	METAL CHIP	47K 5% 1/10W
R6887	1-249-411-11	CARBON	330 5% 1/4W
R6894	1-216-840-11	METAL CHIP	39K 5% 1/10W
R6896	1-216-839-11	METAL CHIP	33K 5% 1/10W
R6897	1-216-853-11	METAL CHIP	470K 5% 1/10W
R8949	1-216-486-21	METAL OXIDE	8.2K 5% 3W
R8950	1-215-923-00	METAL OXIDE	10K 5% 3W
R8951	1-216-486-21	METAL OXIDE	8.2K 5% 3W
R8952	1-215-923-00	METAL OXIDE	10K 5% 3W
R8954	1-260-123-11	CARBON	100K 5% 1/2W
R8955	1-260-123-11	CARBON	100K 5% 1/2W
R8956	1-260-123-11	CARBON	100K 5% 1/2W
R8957	1-216-829-11	METAL CHIP	4.7K 5% 1/10W
R8988	1-260-123-11	CARBON	100K 5% 1/2W
R8989	1-249-429-11	CARBON	10K 5% 1/4W
R8990	1-216-840-11	METAL CHIP	39K 5% 1/10W
R8991	1-216-834-11	METAL CHIP	12K 5% 1/10W
< RESISTOR VARIABLE >			
RV6800	1-241-763-11	RES, ADJ, CERMET 4.7K	
< SPARK GAP >			
SG6800	1-517-499-21	GAP, SPARK	
< TRANSFORMER >			
T6800	£ 1-453-444-11	TRANSFORMER ASSY, FLYBACK (NX-6020//Z2B4)	
T8901	1-437-690-11	TRANSFORMER, FERRITE (DFT)	
* A-1300-579-A A Board, Complete (KV-32FQ70B) * A-1300-172-A A Board, Complete (KV-32FQ70E/32FQ70K) * A-1300-580-A A Board, Complete (KV-32FQ70U)			
A Board, Common Parts			
4-382-854-01	SCREW (M3X8), P, SW (+)		
< CAPACITOR >			
C1001	1-126-933-11	ELECT	100UF 20.00% 16V
C1002	1-126-964-11	ELECT	10UF 20.00% 50V
C1004	1-163-021-91	CERAMIC CHIP	0.01UF 10.00% 50V
C1006	1-126-933-11	ELECT	100UF 20.00% 16V

REF.NO.	PART.NO	DESCRIPTION	REMARK	REF.NO.	PART.NO	DESCRIPTION	REMARK
C1008	1-163-021-91	CERAMIC CHIP 0.01UF	10.00% 50V	C2054	1-126-947-11	ELECT 47UF	20.00% 35V
C1009	1-162-925-11	CERAMIC CHIP 68PF	5.00% 50V	C2055	1-162-968-11	CERAMIC CHIP 0.0047UF	10.00% 50V
C1010	1-162-925-11	CERAMIC CHIP 68PF	5.00% 50V	C2057	1-126-964-11	ELECT 10UF	20.00% 50V
C1014	1-126-933-11	ELECT 100UF	20.00% 16V	C2058	1-164-004-11	CERAMIC CHIP 0.1UF	10.00% 25V
C1015	1-163-021-91	CERAMIC CHIP 0.01UF	10.00% 50V	C2059	1-126-964-11	ELECT 10UF	20.00% 50V
C1018	1-115-340-11	CERAMIC CHIP 0.22UF	10.00% 25V	C2060	1-126-947-11	ELECT 47UF	20.00% 35V
C1020	1-164-004-11	CERAMIC CHIP 0.1UF	10.00% 25V	C2061	1-162-968-11	CERAMIC CHIP 0.0047UF	10.00% 50V
C1021	1-162-968-11	CERAMIC CHIP 0.0047UF	10.00% 50V	C2062	1-164-346-11	CERAMIC CHIP 1UF	16V
C1022	1-216-295-91	SHORT CHIP 0		C2063	1-164-346-11	CERAMIC CHIP 1UF	16V
C2000	1-162-968-11	CERAMIC CHIP 0.0047UF	10.00% 50V	C2064	1-126-964-11	ELECT 10UF	20.00% 50V
C2001	1-162-968-11	CERAMIC CHIP 0.0047UF	10.00% 50V	C2065	1-162-966-11	CERAMIC CHIP 0.0022UF	10.00% 50V
C2006	1-162-962-11	CERAMIC CHIP 470PF	10.00% 50V	C2066	1-162-966-11	CERAMIC CHIP 0.0022UF	10.00% 50V
C2007	1-163-021-91	CERAMIC CHIP 0.01UF	10.00% 50V	C2069	1-127-715-91	CERAMIC CHIP 0.22UF	10% 16V
C2008	1-162-964-11	CERAMIC CHIP 0.001UF	10.00% 50V	C2073	1-126-960-11	ELECT 1UF	20.00% 50V
C2009	1-163-021-91	CERAMIC CHIP 0.01UF	10.00% 50V	C2074	1-126-960-11	ELECT 1UF	20.00% 50V
C2010	1-162-964-11	CERAMIC CHIP 0.001UF	10.00% 50V	C2075	1-126-960-11	ELECT 1UF	20.00% 50V
C2011	1-162-962-11	CERAMIC CHIP 470PF	10.00% 50V	C2077	1-126-960-11	ELECT 1UF	20.00% 50V
C2012	1-162-962-11	CERAMIC CHIP 470PF	10.00% 50V	C2078	1-126-963-11	ELECT 4.7UF	20.00% 50V
C2013	1-162-962-11	CERAMIC CHIP 470PF	10.00% 50V	C2079	1-164-004-11	CERAMIC CHIP 0.1UF	10.00% 25V
C2014	1-164-346-11	CERAMIC CHIP 1UF	16V	C2080	1-162-927-11	CERAMIC CHIP 100PF	5.00% 50V
C2015	1-163-021-91	CERAMIC CHIP 0.01UF	10.00% 50V	C2081	1-162-928-11	CERAMIC CHIP 120PF	5.00% 50V
C2016	1-162-962-11	CERAMIC CHIP 470PF	10.00% 50V	C2082	1-216-864-11	SHORT CHIP 0	
C2018	1-162-962-11	CERAMIC CHIP 470PF	10.00% 50V	C2083	1-162-964-11	CERAMIC CHIP 0.001UF	10.00% 50V
C2019	1-164-346-11	CERAMIC CHIP 1UF	16V	C2084	1-162-962-11	CERAMIC CHIP 470PF	10.00% 50V
C2021	1-162-962-11	CERAMIC CHIP 470PF	10.00% 50V	C2085	1-163-021-91	CERAMIC CHIP 0.01UF	10.00% 50V
C2022	1-162-966-11	CERAMIC CHIP 0.0022UF	10.00% 50V	C2086	1-162-964-11	CERAMIC CHIP 0.001UF	10.00% 50V
C2023	1-162-966-11	CERAMIC CHIP 0.0022UF	10.00% 50V	C2087	1-163-021-91	CERAMIC CHIP 0.01UF	10.00% 50V
C2024	1-164-346-11	CERAMIC CHIP 1UF	16V	C2088	1-162-964-11	CERAMIC CHIP 0.001UF	10.00% 50V
C2026	1-162-962-11	CERAMIC CHIP 470PF	10.00% 50V	C2089	1-162-962-11	CERAMIC CHIP 470PF	10.00% 50V
C2027	1-126-947-11	ELECT 47UF	20.00% 35V	C2090	1-126-947-11	ELECT 47UF	20.00% 35V
C2028	1-126-947-11	ELECT 47UF	20.00% 35V	C2091	1-126-947-11	ELECT 47UF	20.00% 35V
C2029	1-164-346-11	CERAMIC CHIP 1UF	16V	C2092	1-126-947-11	ELECT 47UF	20.00% 35V
C2031	1-162-962-11	CERAMIC CHIP 470PF	10.00% 50V	C2093	1-126-947-11	ELECT 47UF	20.00% 35V
C2034	1-164-346-11	CERAMIC CHIP 1UF	16V	C2094	1-126-947-11	ELECT 47UF	20.00% 35V
C2035	1-164-346-11	CERAMIC CHIP 1UF	16V	C2095	1-126-947-11	ELECT 47UF	20.00% 35V
C2038	1-162-970-11	CERAMIC CHIP 0.01UF	10.00% 25V	C2096	1-162-970-11	CERAMIC CHIP 0.01UF	10.00% 25V
C2039	1-162-906-11	CERAMIC CHIP 1.5PF	0.25PF 50V	C2500	1-126-952-11	ELECT 1000UF	20.00% 35V
C2040	1-162-964-11	CERAMIC CHIP 0.001UF	10.00% 50V	C2502	1-104-666-11	ELECT 220UF	20.00% 25V
C2041	1-162-906-11	CERAMIC CHIP 1.5PF	0.25PF 50V	C2504	1-164-222-91	CERAMIC CHIP 0.22UF	25V
C2042	1-216-864-11	SHORT CHIP 0		C2505	1-115-339-11	CERAMIC CHIP 0.1UF	10.00% 50V
C2043	1-162-962-11	CERAMIC CHIP 470PF	10.00% 50V	C2506	1-126-972-11	ELECT 1000UF	20.00% 50V
C2044	1-163-021-91	CERAMIC CHIP 0.01UF	10.00% 50V	C2507	1-164-230-11	CERAMIC CHIP 220PF	5.00% 50V
C2046	1-162-923-11	CERAMIC CHIP 47PF	5.00% 50V	C2508	1-164-230-11	CERAMIC CHIP 220PF	5.00% 50V
C2047	1-162-927-11	CERAMIC CHIP 100PF	5.00% 50V	C2509	1-164-230-11	CERAMIC CHIP 220PF	5.00% 50V
C2048	1-126-947-11	ELECT 47UF	20.00% 35V	C2510	1-164-227-11	CERAMIC CHIP 0.022UF	10.00% 25V
C2049	1-162-925-11	CERAMIC CHIP 68PF	5.00% 50V	C2511	1-163-021-91	CERAMIC CHIP 0.01UF	10.00% 50V
C2050	1-107-823-11	CERAMIC CHIP 0.47UF	10.00% 16V	C2512	1-163-021-91	CERAMIC CHIP 0.01UF	10.00% 50V
C2051	1-126-964-11	ELECT 10UF	20.00% 50V	C2513	1-126-952-11	ELECT 1000UF	20.00% 35V
C2052	1-164-004-11	CERAMIC CHIP 0.1UF	10.00% 25V	C2515	1-164-227-11	CERAMIC CHIP 0.022UF	10.00% 25V
C2053	1-164-227-11	CERAMIC CHIP 0.022UF	10.00% 25V	C2516	1-126-953-11	ELECT 2200UF	20.00% 35V

REF.NO.	PART.NO	DESCRIPTION	REMARK	REF.NO.	PART.NO	DESCRIPTION	REMARK
C2517	1-126-960-11	ELECT 1UF	20.00% 50V	C5106	1-126-933-11	ELECT 100UF	20.00% 16V
C2518	1-126-960-11	ELECT 1UF	20.00% 50V	C5109	1-126-964-11	ELECT 10UF	20.00% 50V
C2519	1-126-959-11	ELECT 0.47UF	20.00% 50V	C5110	1-126-947-11	ELECT 47UF	20.00% 35V
C2521	1-164-489-11	CERAMIC CHIP 0.22UF	10.00% 16V	C5111	1-126-964-11	ELECT 10UF	20.00% 50V
C2523	1-115-339-11	CERAMIC CHIP 0.1UF	10.00% 50V	C5112	1-126-964-11	ELECT 10UF	20.00% 50V
C3200	1-126-964-11	ELECT 10UF	20.00% 50V	C5114	1-164-156-11	CERAMIC CHIP 0.1UF	25V
C3202	1-104-666-11	ELECT 220UF	20.00% 25V	C5115	1-126-964-11	ELECT 10UF	20.00% 50V
C3203	1-126-964-11	ELECT 10UF	20.00% 50V	C5117	1-126-964-11	ELECT 10UF	20.00% 50V
C3206	1-126-964-11	ELECT 10UF	20.00% 50V	C5118	1-164-156-11	CERAMIC CHIP 0.1UF	25V
C3208	1-163-235-11	CERAMIC CHIP 22PF	5.00% 50V	C5119	1-107-823-11	CERAMIC CHIP 0.47UF	10.00% 16V
C3209	1-163-235-11	CERAMIC CHIP 22PF	5.00% 50V	C5120	1-165-176-11	CERAMIC CHIP 0.047UF	10.00% 16V
C3210	1-126-964-11	ELECT 10UF	20.00% 50V	C5121	1-165-176-11	CERAMIC CHIP 0.047UF	10.00% 16V
C3211	1-126-964-11	ELECT 10UF	20.00% 50V	C5122	1-164-156-11	CERAMIC CHIP 0.1UF	25V
C3213	1-164-222-91	CERAMIC CHIP 0.22UF	25V	C5124	1-164-156-11	CERAMIC CHIP 0.1UF	25V
C3214	1-164-222-91	CERAMIC CHIP 0.22UF	25V	C5125	1-126-964-11	ELECT 10UF	20.00% 50V
C3215	1-164-222-91	CERAMIC CHIP 0.22UF	25V	C5300	1-126-933-11	ELECT 100UF	20.00% 16V
C3216	1-164-222-91	CERAMIC CHIP 0.22UF	25V	C5301	1-126-947-11	ELECT 47UF	20.00% 35V
C3217	1-164-222-91	CERAMIC CHIP 0.22UF	25V	C5302	1-164-222-91	CERAMIC CHIP 0.22UF	25V
C3218	1-164-222-91	CERAMIC CHIP 0.22UF	25V	C5303	1-136-153-00	FILM 0.01UF	5.00% 50V
C3219	1-164-222-91	CERAMIC CHIP 0.22UF	25V	C5304	1-164-182-11	CERAMIC CHIP 0.0033UF	10.00% 50V
C3220	1-164-222-91	CERAMIC CHIP 0.22UF	25V	C5305	1-165-176-11	CERAMIC CHIP 0.047UF	10.00% 16V
C3221	1-164-222-91	CERAMIC CHIP 0.22UF	25V	C5306	1-164-156-11	CERAMIC CHIP 0.1UF	25V
C3222	1-164-222-91	CERAMIC CHIP 0.22UF	25V	C5307	1-164-156-11	CERAMIC CHIP 0.1UF	25V
C3223	1-164-222-91	CERAMIC CHIP 0.22UF	25V	C5309	1-162-927-11	CERAMIC CHIP 100PF	5.00% 50V
C3224	1-164-222-91	CERAMIC CHIP 0.22UF	25V	C5310	1-136-165-00	FILM 0.1UF	5.00% 50V
C3225	1-164-222-91	CERAMIC CHIP 0.22UF	25V	C5311	1-164-156-11	CERAMIC CHIP 0.1UF	25V
C3226	1-164-222-91	CERAMIC CHIP 0.22UF	25V	C5312	1-165-176-11	CERAMIC CHIP 0.047UF	10.00% 16V
C3227	1-164-222-91	CERAMIC CHIP 0.22UF	25V	C5313	1-107-714-11	ELECT 10UF	20.00% 50V
C3228	1-164-489-11	CERAMIC CHIP 0.22UF	10.00% 16V	C5314	1-162-970-11	CERAMIC CHIP 0.01UF	10.00% 25V
C3229	1-164-489-11	CERAMIC CHIP 0.22UF	10.00% 16V	C5316	1-164-230-11	CERAMIC CHIP 220PF	5.00% 50V
C3230	1-164-489-11	CERAMIC CHIP 0.22UF	10.00% 16V	C5318	1-164-156-11	CERAMIC CHIP 0.1UF	25V
C3231	1-164-489-11	CERAMIC CHIP 0.22UF	10.00% 16V	C5319	1-136-347-11	FILM 0.0047UF	5.00% 630V
C3232	1-164-489-11	CERAMIC CHIP 0.22UF	10.00% 16V	C5320	1-129-716-00	FILM 0.015UF	5.00% 630V
C3233	1-164-489-11	CERAMIC CHIP 0.22UF	10.00% 16V	C5321	1-136-347-11	FILM 0.0047UF	5.00% 630V
C3234	1-164-489-11	CERAMIC CHIP 0.22UF	10.00% 16V	C5322	1-164-156-11	CERAMIC CHIP 0.1UF	25V
C3235	1-165-176-11	CERAMIC CHIP 0.047UF	10.00% 16V	C5323	1-136-159-00	FILM 0.033UF	5.00% 50V
C3236	1-165-176-11	CERAMIC CHIP 0.047UF	10.00% 16V	C5400	1-126-964-11	ELECT 10UF	20.00% 50V
C3237	1-165-176-11	CERAMIC CHIP 0.047UF	10.00% 16V	C5401	1-107-714-11	ELECT 10UF	20.00% 50V
C3238	1-165-176-11	CERAMIC CHIP 0.047UF	10.00% 16V	C5403	1-128-527-11	ELECT 330UF	20.00% 25V
C3239	1-165-176-11	CERAMIC CHIP 0.047UF	10.00% 16V	C5404	1-102-228-00	CERAMIC 470PF	10.00% 500V
C3240	1-165-176-11	CERAMIC CHIP 0.047UF	10.00% 16V	C5405	1-163-021-91	CERAMIC CHIP 0.01UF	10.00% 50V
C3241	1-126-933-11	ELECT 100UF	20.00% 16V	C5406	1-129-702-00	MYLAR 0.001UF	10.00% 400V
C3242	1-162-970-11	CERAMIC CHIP 0.01UF	10.00% 25V	C5407	1-128-527-11	ELECT 330UF	20.00% 25V
C3243	1-164-222-91	CERAMIC CHIP 0.22UF	25V	C5409	1-126-968-11	ELECT 100UF	20.00% 50V
C3245	1-163-251-11	CERAMIC CHIP 100PF	5.00% 50V	C5410	1-163-021-91	CERAMIC CHIP 0.01UF	10.00% 50V
C3250	1-163-021-91	CERAMIC CHIP 0.01UF	10.00% 50V	C5411	1-137-401-11	MYLAR 0.22UF	5.00% 100V
C3300	1-163-251-11	CERAMIC CHIP 100PF	5.00% 50V	C5412	1-106-220-00	MYLAR 0.1UF	10.00% 100V
C3309	1-126-964-11	ELECT 10UF	20.00% 50V	C5413	1-130-785-11	MYLAR 0.47UF	5.00% 100V
C3310	1-164-222-91	CERAMIC CHIP 0.22UF	25V	C5414	1-126-964-11	ELECT 10UF	20.00% 50V
C5103	1-126-960-11	ELECT 1UF	20.00% 50V	C5801	1-126-963-11	ELECT 4.7UF	20.00% 50V



REF.NO.	PART.NO	DESCRIPTION	REMARK	REF.NO.	PART.NO	DESCRIPTION	REMARK
C5850	1-126-963-11	ELECT 4.7UF	20.00% 50V	C7050	1-162-927-11	CERAMIC CHIP 100PF	5.00% 50V
C5851	1-107-826-11	CERAMIC CHIP 0.1UF	10.00% 16V	C7051	1-164-004-11	CERAMIC CHIP 0.1UF	10.00% 25V
C5854	1-107-826-11	CERAMIC CHIP 0.1UF	10.00% 16V	C7052	1-164-004-11	CERAMIC CHIP 0.1UF	10.00% 25V
C5858	1-107-826-11	CERAMIC CHIP 0.1UF	10.00% 16V	C7053	1-164-004-11	CERAMIC CHIP 0.1UF	10.00% 25V
C5859	1-126-960-11	ELECT 1UF	20.00% 50V	C7054	1-126-963-11	ELECT 4.7UF	20.00% 50V
C5860	1-165-176-11	CERAMIC CHIP 0.047UF	10.00% 16V	C7055	1-164-222-91	CERAMIC CHIP 0.22UF	25V
C5868	1-164-004-11	CERAMIC CHIP 0.1UF	10.00% 25V	C7056	1-126-933-11	ELECT 100UF	20.00% 16V
C5873	1-163-251-11	CERAMIC CHIP 100PF	5.00% 50V	C7057	1-164-222-91	CERAMIC CHIP 0.22UF	25V
C5888	1-164-156-11	CERAMIC CHIP 0.1UF	25V	C7058	1-126-933-11	ELECT 100UF	20.00% 16V
C5889	1-126-964-11	ELECT 10UF	20.00% 50V	C7059	1-126-933-11	ELECT 100UF	20.00% 16V
C5890	1-164-227-11	CERAMIC CHIP 0.022UF	10.00% 25V	C7060	1-164-222-91	CERAMIC CHIP 0.22UF	25V
C5891	1-137-581-11	FILM 0.1UF	5.00% 100V	C7061	1-164-004-11	CERAMIC CHIP 0.1UF	10.00% 25V
C5892	1-107-826-11	CERAMIC CHIP 0.1UF	10.00% 16V	C7062	1-164-004-11	CERAMIC CHIP 0.1UF	10.00% 25V
C5893	1-126-947-11	ELECT 47UF	20.00% 35V	C7063	1-164-004-11	CERAMIC CHIP 0.1UF	10.00% 25V
C5894	1-126-947-11	ELECT 47UF	20.00% 35V	C7064	1-126-947-11	ELECT 47UF	20.00% 35V
C5895	1-164-156-11	CERAMIC CHIP 0.1UF	25V	C7065	1-164-222-91	CERAMIC CHIP 0.22UF	25V
C5896	1-165-176-11	CERAMIC CHIP 0.047UF	10.00% 16V	C7067	1-126-947-11	ELECT 47UF	20.00% 35V
C5897	1-162-970-11	CERAMIC CHIP 0.01UF	10.00% 25V	C7068	1-164-222-91	CERAMIC CHIP 0.22UF	25V
C5898	1-162-964-11	CERAMIC CHIP 0.001UF	10.00% 50V	C7069	1-162-919-11	CERAMIC CHIP 22PF	5.00% 50V
C5899	1-107-823-11	CERAMIC CHIP 0.47UF	10.00% 16V	C7070	1-162-919-11	CERAMIC CHIP 22PF	5.00% 50V
C6200	1-126-933-11	ELECT 100UF	20.00% 16V	C7071	1-162-919-11	CERAMIC CHIP 22PF	5.00% 50V
C6201	1-126-935-11	ELECT 470UF	20.00% 16V	< CONNECTOR >			
C6202	1-126-933-11	ELECT 100UF	20.00% 16V	CN0101	* 1-823-330-11	CONNECTOR, BOARD TO BOARD 40P	
C6203	1-126-935-11	ELECT 470UF	20.00% 16V	CN0102	* 1-564-520-11	PLUG, CONNECTOR 5P	
C6204	1-126-933-11	ELECT 100UF	20.00% 16V	CN0103	* 1-817-035-61	PLUG, CONNECTOR 4P	
C6205	1-126-935-11	ELECT 470UF	20.00% 16V	CN1000	1-417-319-11	CONNECTOR (SQUARE TYPE) 21P	
C6206	1-126-933-11	ELECT 100UF	20.00% 16V	CN1001	* 1-766-296-21	CONNECTOR, DUAL SCART	
C6207	1-126-933-11	ELECT 100UF	20.00% 16V	CN2000	* 1-564-512-11	PLUG, CONNECTOR 9P	
C6208	1-126-933-11	ELECT 100UF	20.00% 16V	CN2500	* 1-816-974-51	PLUG, CONNECTOR 3P	
C6209	1-126-933-11	ELECT 100UF	20.00% 16V	CN2501	* 1-564-507-11	PLUG, CONNECTOR 4P	
C6210	1-126-935-11	ELECT 470UF	20.00% 16V	CN2502	* 1-816-977-51	PLUG, CONNECTOR 6P	
C6211	1-126-947-11	ELECT 47UF	20.00% 35V	CN5002	* 1-816-984-71	PLUG, CONNECTOR 7P	
C6212	1-126-933-11	ELECT 100UF	20.00% 16V	CN5100	* 1-816-974-51	PLUG, CONNECTOR 3P	
C6213	1-126-933-11	ELECT 100UF	20.00% 16V	CN5801	1-764-333-11	PIN, CONNECTOR(PCB) (V TYPE) 10P	
C6214	1-126-933-11	ELECT 100UF	20.00% 16V	CN5802	* 1-691-772-11	PLUG (MICRO CONNECTOR) 10P	
C7002	1-126-947-11	ELECT 47UF	20.00% 35V	CN6200	* 1-564-507-11	PLUG, CONNECTOR 4P	
C7004	1-164-222-91	CERAMIC CHIP 0.22UF	25V	CN6202	* 1-564-516-11	PLUG, CONNECTOR 13P	
C7008	1-162-919-11	CERAMIC CHIP 22PF	5.00% 50V	CN6203	1-695-915-11	TAB (CONTACT)	
C7016	1-107-823-11	CERAMIC CHIP 0.47UF	10.00% 16V	CN7000	* 1-817-042-81	PLUG, CONNECTOR 5P	
C7018	1-164-004-11	CERAMIC CHIP 0.1UF	10.00% 25V	CN7001	* 1-564-512-11	PLUG, CONNECTOR 9P	
C7019	1-164-004-11	CERAMIC CHIP 0.1UF	10.00% 25V	CN8001	1-766-281-11	PIN, CONNECTOR (PC BOARD) 8P	
C7020	1-164-004-11	CERAMIC CHIP 0.1UF	10.00% 25V	< DIODE >			
C7021	1-164-004-11	CERAMIC CHIP 0.1UF	10.00% 25V	D0101	8-719-921-88	DIODE MTZJ-13B	
C7022	1-164-004-11	CERAMIC CHIP 0.1UF	10.00% 25V	D0104	8-719-109-89	DIODE RD5.6ESB2	
C7023	1-164-004-11	CERAMIC CHIP 0.1UF	10.00% 25V	D0110	8-719-109-89	DIODE RD5.6ESB2	
C7030	1-164-004-11	CERAMIC CHIP 0.1UF	10.00% 25V	D0111	8-719-929-15	DIODE HZS9.1NB2	
C7031	1-164-004-11	CERAMIC CHIP 0.1UF	10.00% 25V	D0112	8-719-921-88	DIODE MTZJ-13B	
C7032	1-164-004-11	CERAMIC CHIP 0.1UF	10.00% 25V				
C7038	1-107-823-11	CERAMIC CHIP 0.47UF	10.00% 16V				
C7039	1-162-966-11	CERAMIC CHIP 0.0022UF	10.00% 50V				

REF.NO.	PART.NO	DESCRIPTION	REMARK	REF.NO.	PART.NO	DESCRIPTION	REMARK
D0113	8-719-921-88	DIODE MTZJ-13B		D5813	8-719-081-97	DIODE MMDL914T1	
D1006	8-719-109-89	DIODE RD5.6ESB2		D5814	1-216-295-91	SHORT CHIP 0	
D2014	8-719-929-15	DIODE HZS9.1NB2		D6200	8-719-063-70	DIODE D1NL20U	
D2015	8-719-929-15	DIODE HZS9.1NB2		D7004	8-719-929-15	DIODE HZS9.1NB2	
D2016	8-719-050-38	DIODE M1MA152WK-T1		D7006	1-216-809-11	METAL CHIP 100 5% 1/10W	
						< FERRITE BEAD >	
D2018	8-719-929-15	DIODE HZS9.1NB2		FB3001	1-414-760-21	FERRITE 0UH	
D2019	8-719-929-15	DIODE HZS9.1NB2				< FILTER >	
D2500	8-719-050-38	DIODE M1MA152WK-T1		FL2000	1-239-803-11	FILTER, EMI	
D2502	8-719-109-89	DIODE RD5.6ESB2				< IC >	
D2503	8-719-050-38	DIODE M1MA152WK-T1		IC2000	6-701-031-11	IC MSP3411C-QA-B11	
D3001	8-719-929-15	DIODE HZS9.1NB2		IC2001	8-759-100-96	IC UPC4558C2	
D3003	8-719-929-15	DIODE HZS9.1NB2		IC2500	8-759-831-56	IC TDA7497	
D3005	8-719-929-15	DIODE HZS9.1NB2		IC3200	6-702-458-01	IC VSP9407B-B11-GE	
D3007	8-719-109-89	DIODE RD5.6ESB2		IC5102	8-759-325-48	IC CA0005AD	
D3008	8-719-109-89	DIODE RD5.6ESB2		IC5103	8-752-072-94	IC CXA1875AM-T4	
D3009	8-719-929-15	DIODE HZS9.1NB2		IC5104	8-759-803-42	IC LA6500-FA	
D3011	8-719-929-15	DIODE HZS9.1NB2		IC5300	8-759-008-70	IC LM358N	
D3013	8-719-929-15	DIODE HZS9.1NB2		IC5301	8-759-659-67	IC LA6393DLL	
D3015	8-719-929-15	DIODE HZS9.1NB2		IC5302	8-759-659-67	IC LA6393DLL	
D3017	8-719-109-89	DIODE RD5.6ESB2		IC5400	8-759-696-71	IC STV9379A	
D3018	8-719-109-89	DIODE RD5.6ESB2		IC6200	8-759-648-19	IC L7809CV/LSY	
D3019	8-719-929-15	DIODE HZS9.1NB2		IC6201	8-759-648-20	IC L7805CV/LSY	
D3021	8-719-929-15	DIODE HZS9.1NB2		IC6202	8-759-445-59	IC BA033T	
D3023	8-719-109-89	DIODE RD5.6ESB2		IC6203	8-759-098-24	IC PQ30RV11	
D3024	8-719-929-15	DIODE HZS9.1NB2		IC6204	8-759-591-02	IC L78L33ABZ-AP	
D3026	8-719-929-15	DIODE HZS9.1NB2		IC6205	8-759-394-35	IC BA12T	
D3028	8-719-929-15	DIODE HZS9.1NB2		IC6206	8-759-991-41	IC LM78L05ACZ	
D3201	8-719-109-89	DIODE RD5.6ESB2		IC7002	8-752-090-88	IC CXA2100AQ-TL	
D5101	8-719-050-38	DIODE M1MA152WK-T1				< SOCKET >	
D5103	8-719-110-86	DIODE RD39ESB		J2000	1-784-632-11	JACK, PIN 2P	
D5104	8-719-109-89	DIODE RD5.6ESB2				< COIL >	
D5300	8-719-081-97	DIODE MMDL914T1		L1000	1-412-987-31	INDUCTOR 4.7UH	
D5303	8-719-081-97	DIODE MMDL914T1		L1001	1-412-987-31	INDUCTOR 4.7UH	
D5304	8-719-081-97	DIODE MMDL914T1		L1002	1-414-934-21	INDUCTOR 10UH	
D5305	8-719-991-33	DIODE 1SS133T-77		L1003	1-414-934-21	INDUCTOR 10UH	
D5306	8-719-302-43	DIODE EL1Z		L1005	1-414-934-21	INDUCTOR 10UH	
D5307	8-719-987-87	DIODE ERA85-009		L2000	1-414-934-21	INDUCTOR 10UH	
D5309	8-719-081-97	DIODE MMDL914T1		L2001	1-414-934-21	INDUCTOR 10UH	
D5310	8-719-081-97	DIODE MMDL914T1		L2007	1-535-303-00	LEAD, JUMPER (5.0MM)	
D5400	8-719-982-03	DIODE MTZJ-3.6A		L2008	1-216-295-91	SHORT CHIP 0	
D5401	8-719-050-38	DIODE M1MA152WK-T1		L2009	1-216-295-91	SHORT CHIP 0	
D5404	8-719-110-41	DIODE RD15ESB2		L2010	1-414-928-21	INDUCTOR 1UH	
D5405	8-719-908-03	DIODE GP08D		L2012	1-414-934-21	INDUCTOR 10UH	
D5406	8-719-081-97	DIODE MMDL914T1					
D5407	8-719-081-97	DIODE MMDL914T1					
D5804	8-719-109-89	DIODE RD5.6ESB2					
D5807	8-719-929-15	DIODE HZS9.1NB2					
D5809	8-719-050-38	DIODE M1MA152WK-T1					
D5811	8-719-081-97	DIODE MMDL914T1					
D5812	8-719-081-97	DIODE MMDL914T1					

**Note :** The components identified by shading and marked  $\Delta$  are critical for safety. Replace only with the part numbers specified in the parts list.

**A**

REF.NO.	PART.NO	DESCRIPTION	REMARK	REF.NO.	PART.NO	DESCRIPTION	REMARK
L2014	1-408-602-31	INDUCTOR	8.2UH	Q2503	8-729-010-29	TRANSISTOR MSD601-RST1	
L2500	1-535-303-00	LEAD, JUMPER	(5.0MM)	Q2504	8-729-010-05	TRANSISTOR MSB709-RT1	
L2501	1-535-303-00	LEAD, JUMPER	(5.0MM)	Q3200	8-729-010-29	TRANSISTOR MSD601-RST1	
L3000	1-216-295-91	SHORT CHIP	0	Q3201	8-729-010-29	TRANSISTOR MSD601-RST1	
L3004	1-216-295-91	SHORT CHIP	0	Q3202	8-729-010-05	TRANSISTOR MSB709-RT1	
L3005	1-216-295-91	SHORT CHIP	0	Q3204	8-729-010-05	TRANSISTOR MSB709-RT1	
L3006	1-216-295-91	SHORT CHIP	0	Q3300	8-729-010-05	TRANSISTOR MSB709-RT1	
L3007	1-216-295-91	SHORT CHIP	0	Q3301	8-729-010-05	TRANSISTOR MSB709-RT1	
L3008	1-216-295-91	SHORT CHIP	0	Q3302	8-729-010-05	TRANSISTOR MSB709-RT1	
L3009	1-216-295-91	SHORT CHIP	0	Q3500	8-729-028-28	TRANSISTOR 2SK2036(TE85L)	
L3010	1-216-295-91	SHORT CHIP	0	Q3501	8-729-028-28	TRANSISTOR 2SK2036(TE85L)	
L3011	1-216-295-91	SHORT CHIP	0	Q5100	8-729-010-05	TRANSISTOR MSB709-RT1	
L3012	1-216-295-91	SHORT CHIP	0	Q5101	8-729-010-29	TRANSISTOR MSD601-RST1	
L3200	1-412-006-31	INDUCTOR	10UH	Q5300	8-729-010-29	TRANSISTOR MSD601-RST1	
L3202	1-412-006-31	INDUCTOR	10UH	Q5301	8-729-053-33	TRANSISTOR IRF614-037	
L3203	1-412-006-31	INDUCTOR	10UH	Q5302	8-729-140-97	TRANSISTOR 2SB734-34	
L3206	1-412-006-31	INDUCTOR	10UH	Q5303	8-729-010-29	TRANSISTOR MSD601-RST1	
L3208	1-412-006-31	INDUCTOR	10UH	Q5304	8-729-010-29	TRANSISTOR MSD601-RST1	
L3300	1-412-006-31	INDUCTOR	10UH	Q5305	8-729-119-78	TRANSISTOR 2SC2785-HFE	
L5300	1-406-989-21	INDUCTOR	10MH	Q5306	8-729-140-97	TRANSISTOR 2SB734-34	
L5301	1-406-989-21	INDUCTOR	10MH	Q5307	8-729-010-05	TRANSISTOR MSB709-RT1	
L5400	1-412-524-11	INDUCTOR	8.2UH	Q5400	8-729-010-29	TRANSISTOR MSD601-RST1	
L5896	1-216-864-11	SHORT CHIP	0	Q5401	8-729-421-19	TRANSISTOR UN2213	
L5897	1-216-864-11	SHORT CHIP	0	Q5402	8-729-010-05	TRANSISTOR MSB709-RT1	
L5898	1-414-934-21	INDUCTOR	10UH	Q5403	8-729-421-19	TRANSISTOR UN2213	
L5899	1-414-934-21	INDUCTOR	10UH	Q5404	8-729-926-76	TRANSISTOR IRF620	
L7001	1-414-934-21	INDUCTOR	10UH	Q5813	8-729-421-19	TRANSISTOR UN2213	
L7009	1-414-934-21	INDUCTOR	10UH	Q5814	8-729-010-05	TRANSISTOR MSB709-RT1	
L7010	1-414-934-21	INDUCTOR	10UH	Q5815	8-729-010-29	TRANSISTOR MSD601-RST1	
L7011	1-414-934-21	INDUCTOR	10UH	Q5816	8-729-010-05	TRANSISTOR MSB709-RT1	
L7012	1-414-934-21	INDUCTOR	10UH	Q6201	8-729-140-97	TRANSISTOR 2SB734-34	
< PROTECTOR MODULE >				Q7003	8-729-010-29	TRANSISTOR MSD601-RST1	
PS2501	1-533-597-31	IC LINK	5A	Q7009	8-729-010-05	TRANSISTOR MSB709-RT1	
< TRANSISTOR >				Q7011	8-729-010-05	TRANSISTOR MSB709-RT1	
Q1000	8-729-010-05	TRANSISTOR MSB709-RT1		Q7012	8-729-010-05	TRANSISTOR MSB709-RT1	
Q1001	8-729-010-29	TRANSISTOR MSD601-RST1		Q7013	8-729-010-29	TRANSISTOR MSD601-RST1	
Q1004	8-729-010-05	TRANSISTOR MSB709-RT1		Q7014	8-729-010-05	TRANSISTOR MSB709-RT1	
Q1005	8-729-421-19	TRANSISTOR UN2213		Q7015	8-729-010-05	TRANSISTOR MSB709-RT1	
Q1006	8-729-010-05	TRANSISTOR MSB709-RT1		Q7016	8-729-010-29	TRANSISTOR MSD601-RST1	
Q2000	8-729-010-29	TRANSISTOR MSD601-RST1		Q7017	8-729-010-05	TRANSISTOR MSB709-RT1	
Q2001	8-729-010-29	TRANSISTOR MSD601-RST1		Q7018	8-729-010-05	TRANSISTOR MSB709-RT1	
Q2002	8-729-010-29	TRANSISTOR MSD601-RST1		Q7019	8-729-010-29	TRANSISTOR MSD601-RST1	
Q2003	8-729-010-29	TRANSISTOR MSD601-RST1		< RESISTOR >			
Q2004	8-729-010-29	TRANSISTOR MSD601-RST1		JR121	1-216-864-11	SHORT CHIP	0
Q2005	8-729-010-29	TRANSISTOR MSD601-RST1		JR123	1-216-864-11	SHORT CHIP	0
Q2501	8-729-010-29	TRANSISTOR MSD601-RST1		JR2000	1-216-295-91	SHORT CHIP	0
Q2502	8-729-010-29	TRANSISTOR MSD601-RST1		R0101	1-216-833-11	METAL CHIP	10K 5% 1/10W
				R0102	1-216-827-11	METAL CHIP	3.3K 5% 1/10W



REF.NO.	PART.NO	DESCRIPTION	REMARK			REF.NO.	PART.NO	DESCRIPTION	REMARK		
R0103	1-216-073-91	RES-CHIP	10K	5%	1/10W	R2056	1-216-037-00	RES-CHIP	330	5%	1/10W
R0104	1-216-827-11	METAL CHIP	3.3K	5%	1/10W	R2057	1-216-025-11	RES-CHIP	100	5%	1/10W
R0105	1-216-025-11	RES-CHIP	100	5%	1/10W	R2058	1-216-025-11	RES-CHIP	100	5%	1/10W
R0107	1-216-025-11	RES-CHIP	100	5%	1/10W	R2059	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R1000	1-216-049-11	RES-CHIP	1K	5%	1/10W	R2060	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R1001	1-216-001-00	RES-CHIP	10	5%	1/10W	R2061	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R1002	1-216-821-11	METAL CHIP	1K	5%	1/10W	R2062	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R1003	1-216-809-11	METAL CHIP	100	5%	1/10W	R2063	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R1004	1-216-809-11	METAL CHIP	100	5%	1/10W	R2064	1-249-425-11	CARBON	4.7K	5%	1/4W
R1005	1-216-049-11	RES-CHIP	1K	5%	1/10W	R2065	1-216-837-11	METAL CHIP	22K	5%	1/10W
R1006	1-216-051-00	RES-CHIP	1.2K	5%	1/10W	R2066	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R1007	1-412-987-31	INDUCTOR	4.7UH			R2067	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R1008	1-216-295-91	SHORT CHIP	0			R2068	1-216-049-11	RES-CHIP	1K	5%	1/10W
R1009	1-216-295-91	SHORT CHIP	0			R2069	1-216-837-11	METAL CHIP	22K	5%	1/10W
R1010	1-216-295-91	SHORT CHIP	0			R2070	1-216-833-11	METAL CHIP	10K	5%	1/10W
R1014	1-216-295-91	SHORT CHIP	0			R2071	1-216-839-11	METAL CHIP	33K	5%	1/10W
R1017	1-216-822-11	METAL CHIP	1.2K	5%	1/10W	R2072	1-216-049-11	RES-CHIP	1K	5%	1/10W
R1019	1-216-295-91	SHORT CHIP	0			R2073	1-216-049-11	RES-CHIP	1K	5%	1/10W
R1021	1-216-833-11	METAL CHIP	10K	5%	1/10W	R2074	1-216-837-11	METAL CHIP	22K	5%	1/10W
R1022	1-216-839-11	METAL CHIP	33K	5%	1/10W	R2075	1-216-833-11	METAL CHIP	10K	5%	1/10W
R1023	1-216-849-11	METAL CHIP	220K	5%	1/10W	R2076	1-216-839-11	METAL CHIP	33K	5%	1/10W
R1024	1-216-839-11	METAL CHIP	33K	5%	1/10W	R2077	1-216-049-11	RES-CHIP	1K	5%	1/10W
R1025	1-216-837-11	METAL CHIP	22K	5%	1/10W	R2078	1-216-025-11	RES-CHIP	100	5%	1/10W
R1026	1-216-817-11	METAL CHIP	470	5%	1/10W	R2079	1-216-049-11	RES-CHIP	1K	5%	1/10W
R2009	1-216-817-11	METAL CHIP	470	5%	1/10W	R2080	1-218-867-11	METAL CHIP	6.8K	0.5%	1/10W
R2010	1-216-817-11	METAL CHIP	470	5%	1/10W	R2081	1-216-833-11	METAL CHIP	10K	5%	1/10W
R2011	1-216-049-11	RES-CHIP	1K	5%	1/10W	R2082	1-216-805-11	METAL CHIP	47	5%	1/10W
R2014	1-216-049-11	RES-CHIP	1K	5%	1/10W	R2083	1-216-817-11	METAL CHIP	470	5%	1/10W
R2015	1-216-295-91	SHORT CHIP	0			R2084	1-216-837-11	METAL CHIP	22K	5%	1/10W
R2017	1-216-853-11	METAL CHIP	470K	5%	1/10W	R2085	1-216-837-11	METAL CHIP	22K	5%	1/10W
R2018	1-216-295-91	SHORT CHIP	0			R2086	1-216-837-11	METAL CHIP	22K	5%	1/10W
R2020	1-216-853-11	METAL CHIP	470K	5%	1/10W	R2087	1-216-837-11	METAL CHIP	22K	5%	1/10W
R2023	1-216-853-11	METAL CHIP	470K	5%	1/10W	R2088	1-216-041-00	RES-CHIP	470	5%	1/10W
R2026	1-216-853-11	METAL CHIP	470K	5%	1/10W	R2089	1-216-041-00	RES-CHIP	470	5%	1/10W
R2029	1-216-853-11	METAL CHIP	470K	5%	1/10W	R2092	1-216-039-00	RES-CHIP	390	5%	1/10W
R2032	1-216-853-11	METAL CHIP	470K	5%	1/10W	R2093	1-216-039-00	RES-CHIP	390	5%	1/10W
R2035	1-216-853-11	METAL CHIP	470K	5%	1/10W	R2094	1-216-039-00	RES-CHIP	390	5%	1/10W
R2038	1-216-853-11	METAL CHIP	470K	5%	1/10W	R2095	1-216-039-00	RES-CHIP	390	5%	1/10W
R2041	1-216-853-11	METAL CHIP	470K	5%	1/10W	R2096	1-216-039-00	RES-CHIP	390	5%	1/10W
R2042	1-216-829-11	METAL CHIP	4.7K	5%	1/10W	R2097	1-216-039-00	RES-CHIP	390	5%	1/10W
R2043	1-216-829-11	METAL CHIP	4.7K	5%	1/10W	R2098	1-216-049-11	RES-CHIP	1K	5%	1/10W
R2044	1-216-853-11	METAL CHIP	470K	5%	1/10W	R2099	1-216-049-11	RES-CHIP	1K	5%	1/10W
R2047	1-216-853-11	METAL CHIP	470K	5%	1/10W	R2500	1-216-073-91	RES-CHIP	10K	5%	1/10W
R2048	1-216-837-11	METAL CHIP	22K	5%	1/10W	R2501	1-216-341-11	METAL OXIDE	0.22	5%	1W
R2050	1-216-845-11	METAL CHIP	100K	5%	1/10W	R2502	1-208-810-11	METAL CHIP	15K	0.5%	1/10W
R2051	1-216-049-11	RES-CHIP	1K	5%	1/10W	R2503	1-208-810-11	METAL CHIP	15K	0.5%	1/10W
R2052	1-216-837-11	METAL CHIP	22K	5%	1/10W	R2504	1-216-049-11	RES-CHIP	1K	5%	1/10W
R2053	1-216-864-11	SHORT CHIP	0			R2507	1-216-837-11	METAL CHIP	22K	5%	1/10W
R2054	1-216-049-11	RES-CHIP	1K	5%	1/10W	R2509	1-249-417-11	CARBON	1K	5%	1/4W
R2055	1-216-049-11	RES-CHIP	1K	5%	1/10W	R2511	1-216-073-91	RES-CHIP	10K	5%	1/10W

REF.NO.	PART.NO	DESCRIPTION	REMARK			REF.NO.	PART.NO	DESCRIPTION	REMARK		
R2516	1-216-081-00	RES-CHIP	22K	5%	1/10W	R3219	1-216-821-11	METAL CHIP	1K	5%	1/10W
R2517	1-216-841-11	METAL CHIP	47K	5%	1/10W	R3220	1-216-837-11	METAL CHIP	22K	5%	1/10W
R2518	1-216-049-11	RES-CHIP	1K	5%	1/10W	R3221	1-216-837-11	METAL CHIP	22K	5%	1/10W
R2519	1-216-833-11	METAL CHIP	10K	5%	1/10W	R3222	1-216-837-11	METAL CHIP	22K	5%	1/10W
R2520	1-216-025-11	RES-CHIP	100	5%	1/10W	R3223	1-216-837-11	METAL CHIP	22K	5%	1/10W
R2524	1-216-833-11	METAL CHIP	10K	5%	1/10W	R3225	1-216-025-11	RES-CHIP	100	5%	1/10W
R2525	1-216-828-11	METAL CHIP	3.9K	5%	1/10W	R3226	1-216-025-11	RES-CHIP	100	5%	1/10W
R2912	1-216-295-91	SHORT CHIP	0			R3229	1-216-025-11	RES-CHIP	100	5%	1/10W
R2914	1-216-853-11	METAL CHIP	470K	5%	1/10W	R3233	1-216-821-11	METAL CHIP	1K	5%	1/10W
R2921	1-216-295-91	SHORT CHIP	0			R3234	1-216-821-11	METAL CHIP	1K	5%	1/10W
R2924	1-216-295-91	SHORT CHIP	0			R3235	1-216-822-11	METAL CHIP	1.2K	5%	1/10W
R2927	1-216-295-91	SHORT CHIP	0			R3236	1-216-822-11	METAL CHIP	1.2K	5%	1/10W
R2930	1-216-295-91	SHORT CHIP	0			R3237	1-216-797-11	METAL CHIP	10	5%	1/10W
R2933	1-216-295-91	SHORT CHIP	0			R3238	1-216-797-11	METAL CHIP	10	5%	1/10W
R2936	1-216-295-91	SHORT CHIP	0			R3305	1-216-025-11	RES-CHIP	100	5%	1/10W
R2939	1-216-295-91	SHORT CHIP	0			R3306	1-216-025-11	RES-CHIP	100	5%	1/10W
R2942	1-216-295-91	SHORT CHIP	0			R3312	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R2945	1-216-295-91	SHORT CHIP	0			R3313	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R3000	1-216-025-11	RES-CHIP	100	5%	1/10W	R3314	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R3001	1-216-022-00	RES-CHIP	75	5%	1/10W	R3318	1-216-025-11	RES-CHIP	100	5%	1/10W
R3009	1-216-025-11	RES-CHIP	100	5%	1/10W	R3319	1-216-025-11	RES-CHIP	100	5%	1/10W
R3010	1-216-022-00	RES-CHIP	75	5%	1/10W	R3320	1-216-025-11	RES-CHIP	100	5%	1/10W
R3011	1-216-025-11	RES-CHIP	100	5%	1/10W	R3403	1-216-821-11	METAL CHIP	1K	5%	1/10W
R3012	1-216-022-00	RES-CHIP	75	5%	1/10W	R3500	1-216-834-11	METAL CHIP	12K	5%	1/10W
R3013	1-216-025-11	RES-CHIP	100	5%	1/10W	R3501	1-216-834-11	METAL CHIP	12K	5%	1/10W
R3014	1-216-022-00	RES-CHIP	75	5%	1/10W	R3504	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R3015	1-216-022-00	RES-CHIP	75	5%	1/10W	R3505	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R3016	1-216-025-11	RES-CHIP	100	5%	1/10W	R3603	1-216-295-91	SHORT CHIP	0		
R3017	1-216-022-00	RES-CHIP	75	5%	1/10W	R5102	1-208-814-91	METAL CHIP	22K	0.5%	1/10W
R3018	1-216-025-11	RES-CHIP	100	5%	1/10W	R5103	1-218-833-11	METAL CHIP	270	0.5%	1/10W
R3019	1-216-022-00	RES-CHIP	75	5%	1/10W	R5107	1-208-814-91	METAL CHIP	22K	0.5%	1/10W
R3020	1-216-025-11	RES-CHIP	100	5%	1/10W	R5111	1-208-814-91	METAL CHIP	22K	0.5%	1/10W
R3021	1-216-022-00	RES-CHIP	75	5%	1/10W	R5112	1-218-875-11	METAL CHIP	15K	0.5%	1/10W
R3022	1-216-025-11	RES-CHIP	100	5%	1/10W	R5118	1-249-411-11	CARBON	330	5%	1/4W
R3023	1-216-022-00	RES-CHIP	75	5%	1/10W	R5119	1-216-844-11	METAL CHIP	82K	5%	1/10W
R3024	1-216-025-11	RES-CHIP	100	5%	1/10W	R5122	1-216-821-11	METAL CHIP	1K	5%	1/10W
R3025	1-216-022-00	RES-CHIP	75	5%	1/10W	R5125	1-216-836-11	METAL CHIP	18K	5%	1/10W
R3026	1-216-022-00	RES-CHIP	75	5%	1/10W	R5126	1-249-406-11	CARBON	120	5%	1/4W
R3027	1-216-025-11	RES-CHIP	100	5%	1/10W	R5127	1-216-025-11	RES-CHIP	100	5%	1/10W
R3028	1-216-022-00	RES-CHIP	75	5%	1/10W	R5128	1-216-809-11	METAL CHIP	100	5%	1/10W
R3029	1-216-045-00	RES-CHIP	680	5%	1/10W	R5129	1-216-809-11	METAL CHIP	100	5%	1/10W
R3030	1-216-022-00	RES-CHIP	75	5%	1/10W	R5130	1-216-809-11	METAL CHIP	100	5%	1/10W
R3031	1-216-022-00	RES-CHIP	75	5%	1/10W	R5131	1-216-821-11	METAL CHIP	1K	5%	1/10W
R3032	1-216-022-00	RES-CHIP	75	5%	1/10W	R5132	1-216-809-11	METAL CHIP	100	5%	1/10W
R3033	1-216-025-11	RES-CHIP	100	5%	1/10W	R5133	1-216-809-11	METAL CHIP	100	5%	1/10W
R3034	1-216-022-00	RES-CHIP	75	5%	1/10W	R5137	1-216-809-11	METAL CHIP	100	5%	1/10W
R3035	1-216-025-11	RES-CHIP	100	5%	1/10W	R5138	1-216-809-11	METAL CHIP	100	5%	1/10W
R3036	1-216-022-00	RES-CHIP	75	5%	1/10W	R5139	1-216-821-11	METAL CHIP	1K	5%	1/10W
R3037	1-216-045-00	RES-CHIP	680	5%	1/10W	R5140	1-216-821-11	METAL CHIP	1K	5%	1/10W
R3218	1-216-821-11	METAL CHIP	1K	5%	1/10W	R5146	1-216-025-11	RES-CHIP	100	5%	1/10W

REF.NO.	PART.NO	DESCRIPTION	REMARK			REF.NO.	PART.NO	DESCRIPTION	REMARK		
R5148	1-216-809-11	METAL CHIP	100	5%	1/10W	R5345	1-208-832-11	METAL CHIP	120K	0.5%	1/10W
R5149	1-218-833-11	METAL CHIP	270	0.5%	1/10W	R5346	1-216-849-11	METAL CHIP	220K	5%	1/10W
R5150	1-249-414-11	CARBON	560	5%	1/4W	R5347	1-216-833-11	METAL CHIP	10K	5%	1/10W
R5151	1-249-454-11	CARBON	3.9	5%	1/4W	R5349	1-216-043-91	RES-CHIP	560	5%	1/10W
R5152	1-249-413-11	CARBON	470	5%	1/4W	R5350	1-216-041-00	RES-CHIP	470	5%	1/10W
R5153	1-249-393-11	CARBON	10	5%	1/4W	R5351	1-216-809-11	METAL CHIP	100	5%	1/10W
R5154	1-216-833-11	METAL CHIP	10K	5%	1/10W	R5352	1-216-821-11	METAL CHIP	1K	5%	1/10W
R5155	1-249-421-11	CARBON	2.2K	5%	1/4W	R5400	1-216-849-11	METAL CHIP	220K	5%	1/10W
R5156	1-216-833-11	METAL CHIP	10K	5%	1/10W	R5401	1-216-837-11	METAL CHIP	22K	5%	1/10W
R5157	1-216-829-11	METAL CHIP	4.7K	5%	1/10W	R5402	1-216-081-00	RES-CHIP	22K	5%	1/10W
R5300	1-208-806-11	METAL CHIP	10K	0.5%	1/10W	R5403	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R5301	1-216-829-11	METAL CHIP	4.7K	5%	1/10W	R5404	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R5302	1-208-806-11	METAL CHIP	10K	0.5%	1/10W	R5405	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R5303	1-216-685-11	METAL CHIP	27K	0.5%	1/10W	R5407	1-216-857-11	METAL CHIP	1M	5%	1/10W
R5304	1-208-806-11	METAL CHIP	10K	0.5%	1/10W	R5408	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R5305	1-208-852-11	METAL CHIP	820K	0.5%	1/10W	R5409	1-208-802-11	METAL CHIP	6.8K	0.5%	1/10W
R5306	1-208-802-11	METAL CHIP	6.8K	0.5%	1/10W	R5410	1-208-798-11	METAL CHIP	4.7K	0.5%	1/10W
R5307	1-216-041-00	RES-CHIP	470	5%	1/10W	R5411	1-216-061-91	RES-CHIP	3.3K	5%	1/10W
R5308	1-216-295-91	SHORT CHIP	0			R5413	1-208-802-11	METAL CHIP	6.8K	0.5%	1/10W
R5309	1-208-824-11	METAL CHIP	56K	0.5%	1/10W	R5414	1-249-383-11	CARBON	1.5	5%	1/4W
R5310	1-208-830-11	METAL CHIP	100K	0.5%	1/10W	R5415	1-249-389-11	CARBON	4.7	5%	1/4W
R5311	1-216-045-00	RES-CHIP	680	5%	1/10W	R5416	1-215-888-00	METAL OXIDE	220	5%	2W
R5312	1-208-832-11	METAL CHIP	120K	0.5%	1/10W	R5417	1-208-798-11	METAL CHIP	4.7K	0.5%	1/10W
R5314	1-208-840-11	METAL CHIP	270K	0.5%	1/10W	R5420	1-214-798-21	METAL	1.8	1%	1/2W
R5315	1-216-043-91	RES-CHIP	560	5%	1/10W	R5421	1-214-798-21	METAL	1.8	1%	1/2W
R5316	1-216-057-00	RES-CHIP	2.2K	5%	1/10W	R5804	1-216-049-11	RES-CHIP	1K	5%	1/10W
R5317	1-216-845-11	METAL CHIP	100K	5%	1/10W	R5805	1-216-049-11	RES-CHIP	1K	5%	1/10W
R5318	1-208-806-11	METAL CHIP	10K	0.5%	1/10W	R5806	1-216-089-91	RES-CHIP	47K	5%	1/10W
R5319	1-208-840-11	METAL CHIP	270K	0.5%	1/10W	R5807	1-216-049-11	RES-CHIP	1K	5%	1/10W
R5320	1-216-833-11	METAL CHIP	10K	5%	1/10W	R5808	1-216-049-11	RES-CHIP	1K	5%	1/10W
R5321	1-216-837-11	METAL CHIP	22K	5%	1/10W	R5809	1-216-073-91	RES-CHIP	10K	5%	1/10W
R5322	1-216-820-11	METAL CHIP	820	5%	1/10W	R5865	1-216-841-11	METAL CHIP	47K	5%	1/10W
R5324	1-208-810-11	METAL CHIP	15K	0.5%	1/10W	R5869	1-216-817-11	METAL CHIP	470	5%	1/10W
R5325	1-208-812-11	METAL CHIP	18K	0.5%	1/10W	R5871	1-216-850-11	METAL CHIP	270K	5%	1/10W
R5326	1-216-845-11	METAL CHIP	100K	5%	1/10W	R5872	1-216-073-91	RES-CHIP	10K	5%	1/10W
R5327	1-216-472-00	METAL OXIDE	39	5%	3W	R5873	1-216-073-91	RES-CHIP	10K	5%	1/10W
R5328	1-216-033-00	RES-CHIP	220	5%	1/10W	R5875	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R5331	1-216-033-00	RES-CHIP	220	5%	1/10W	R5877	1-216-821-11	METAL CHIP	1K	5%	1/10W
R5332	1-208-806-11	METAL CHIP	10K	0.5%	1/10W	R5878	1-216-049-11	RES-CHIP	1K	5%	1/10W
R5333	1-208-820-11	METAL CHIP	39K	0.5%	1/10W	R5879	1-216-809-11	METAL CHIP	100	5%	1/10W
R5334	1-208-834-11	METAL CHIP	150K	0.5%	1/10W	R5880	1-216-809-11	METAL CHIP	100	5%	1/10W
R5335	1-208-818-11	METAL CHIP	33K	0.5%	1/10W	R5881	1-216-833-11	METAL CHIP	10K	5%	1/10W
R5336	1-216-057-00	RES-CHIP	2.2K	5%	1/10W	R5882	1-216-833-11	METAL CHIP	10K	5%	1/10W
R5337	1-218-867-11	METAL CHIP	6.8K	0.5%	1/10W	R5884	1-216-841-11	METAL CHIP	47K	5%	1/10W
R5338	1-249-413-11	CARBON	470	5%	1/4W	R5885	1-216-809-11	METAL CHIP	100	5%	1/10W
R5340	1-216-049-11	RES-CHIP	1K	5%	1/10W	R5887	1-216-809-11	METAL CHIP	100	5%	1/10W
R5341	1-216-089-91	RES-CHIP	47K	5%	1/10W	R5888	1-216-809-11	METAL CHIP	100	5%	1/10W
R5342	1-208-818-11	METAL CHIP	33K	0.5%	1/10W	R5889	1-208-806-11	METAL CHIP	10K	0.5%	1/10W
R5343	1-208-808-11	METAL CHIP	12K	0.5%	1/10W	R5892	1-216-833-11	METAL CHIP	10K	5%	1/10W
R5344	1-208-820-11	METAL CHIP	39K	0.5%	1/10W	R5895	1-216-833-11	METAL CHIP	10K	5%	1/10W



REF.NO.	PART.NO	DESCRIPTION	REMARK		
R5898	1-216-832-11	METAL CHIP	8.2K	5%	1/10W
R5899	1-216-863-11	METAL CHIP	3.3M	5%	1/10W
R6200	1-218-831-11	METAL CHIP	220	0.5%	1/10W
R6201	1-218-839-11	METAL CHIP	470	0.5%	1/10W
R6202	1-249-395-11	CARBON	15	5%	1/4W
R7007	1-216-049-11	RES-CHIP	1K	5%	1/10W
R7018	1-216-025-11	RES-CHIP	100	5%	1/10W
R7023	1-216-834-11	METAL CHIP	12K	5%	1/10W
R7034	1-216-025-11	RES-CHIP	100	5%	1/10W
R7035	1-216-025-11	RES-CHIP	100	5%	1/10W
R7048	1-216-025-11	RES-CHIP	100	5%	1/10W
R7050	1-216-833-11	METAL CHIP	10K	5%	1/10W
R7051	1-216-025-11	RES-CHIP	100	5%	1/10W
R7052	1-216-025-11	RES-CHIP	100	5%	1/10W
R7053	1-216-049-11	RES-CHIP	1K	5%	1/10W
R7054	1-216-847-11	METAL CHIP	150K	5%	1/10W
R7056	1-218-867-11	METAL CHIP	6.8K	0.5%	1/10W
R7057	1-216-842-11	METAL CHIP	56K	5%	1/10W
R7058	1-216-049-11	RES-CHIP	1K	5%	1/10W
R7065	1-216-821-11	METAL CHIP	1K	5%	1/10W
R7066	1-216-809-11	METAL CHIP	100	5%	1/10W
R7068	1-218-877-11	METAL CHIP	18K	0.5%	1/10W
R7070	1-216-817-11	METAL CHIP	470	5%	1/10W
R7071	1-216-817-11	METAL CHIP	470	5%	1/10W
R7072	1-216-817-11	METAL CHIP	470	5%	1/10W
R7073	1-216-041-00	RES-CHIP	470	5%	1/10W
R7074	1-216-043-91	RES-CHIP	560	5%	1/10W
R7075	1-216-817-11	METAL CHIP	470	5%	1/10W
R7076	1-216-041-00	RES-CHIP	470	5%	1/10W
R7077	1-216-043-91	RES-CHIP	560	5%	1/10W
R7078	1-216-817-11	METAL CHIP	470	5%	1/10W
R7079	1-216-041-00	RES-CHIP	470	5%	1/10W
R7080	1-216-043-91	RES-CHIP	560	5%	1/10W
R7081	1-216-817-11	METAL CHIP	470	5%	1/10W
R7082	1-208-782-11	METAL CHIP	1K	0.5%	1/10W
R7088	1-208-783-11	METAL CHIP	1.1K	0.5%	1/10W
R7089	1-216-819-11	METAL CHIP	680	5%	1/10W
R7090	1-216-819-11	METAL CHIP	680	5%	1/10W
R7091	1-216-819-11	METAL CHIP	680	5%	1/10W
R7092	1-216-295-91	SHORT CHIP	0		
R7093	1-216-295-91	SHORT CHIP	0		
R7094	1-216-295-91	SHORT CHIP	0		
R7095	1-216-295-91	SHORT CHIP	0		
R7096	1-216-803-11	METAL CHIP	33	5%	1/10W
R7097	1-216-803-11	METAL CHIP	33	5%	1/10W
R7098	1-216-803-11	METAL CHIP	33	5%	1/10W
< CRYSTAL >					
X2000	1-760-628-11	VIBRATOR, CRYSTAL			

REF.NO.	PART.NO	DESCRIPTION	REMARK
X3200	1-781-946-21	VIBRATOR, CRYSTAL	
X5800	1-767-127-11	VIBRATOR, CERAMIC	

#### A Board, Variant Parts (KV-32FQ70B)

< TUNER >

TU1000	8-598-535-20	FRONTEND BTF-EF411
--------	--------------	--------------------

#### A Board, Variant Parts (KV-32FQ70E / KV-32FQ70K)

< TUNER >

TU1000	8-598-533-10	FRONTEND BTF-EC411
--------	--------------	--------------------

#### A Board, Variant Parts (KV-32FQ70U)

< TUNER >

TU1000	8-598-529-10	FRONTEND BTF-EU611
--------	--------------	--------------------

#### \* A-1302-133-A C Board, Complete

4-382-854-01	SCREW (M3X8), P, SW (+)
--------------	-------------------------

< CAPACITOR >

C7303	1-162-909-11	CERAMIC CHIP 4PF	0.25PF 50V
C7304	1-107-967-11	ELECT 1UF	20.00% 400V
C7305	1-136-207-11	MYLAR 0.047UF	5.00% 630V
C7306	1-115-416-11	CERAMIC CHIP 0.001UF	5.00% 25V
C7308	1-162-909-11	CERAMIC CHIP 4PF	0.25PF 50V
C7309	1-164-156-11	CERAMIC CHIP 0.1UF	25V
C7310	1-162-923-11	CERAMIC CHIP 47PF	5.00% 50V
C7325	1-162-909-11	CERAMIC CHIP 4PF	0.25PF 50V
C7326	1-115-416-11	CERAMIC CHIP 0.001UF	5.00% 25V
C7329	1-107-967-11	ELECT 1UF	20.00% 400V
C7330	1-136-207-11	MYLAR 0.047UF	5.00% 630V
C7331	1-162-909-11	CERAMIC CHIP 4PF	0.25PF 50V
C7333	1-164-156-11	CERAMIC CHIP 0.1UF	25V
C7334	1-162-923-11	CERAMIC CHIP 47PF	5.00% 50V
C7350	1-128-551-11	ELECT 22UF	20.00% 63V
C7351	1-162-909-11	CERAMIC CHIP 4PF	0.25PF 50V
C7352	1-115-416-11	CERAMIC CHIP 0.001UF	5.00% 25V
C7354	1-126-947-11	ELECT 47UF	20.00% 35V
C7355	1-107-967-11	ELECT 1UF	20.00% 400V
C7356	1-136-207-11	MYLAR 0.047UF	5.00% 630V
C7358	1-162-909-11	CERAMIC CHIP 4PF	0.25PF 50V
C7359	1-164-156-11	CERAMIC CHIP 0.1UF	25V
C7360	1-162-923-11	CERAMIC CHIP 47PF	5.00% 50V
C7378	1-162-116-00	CERAMIC 680PF	10.00% 2KV
C7379	1-115-350-51	CERAMIC 0.0047UF	2KV
C7380	1-107-662-11	ELECT 22UF	20.00% 350V
C7384	1-162-911-11	CERAMIC CHIP 6PF	0.50PF 50V

**Note :** The components identified by shading and marked Δ are critical for safety. Replace only with the part numbers specified in the parts list.

**C**

**F1**

REF.NO.	PART.NO	DESCRIPTION	REMARK	REF.NO.	PART.NO	DESCRIPTION	REMARK
C7385	1-162-913-11	CERAMIC CHIP 8PF	0.50PF 50V	R7325	1-249-417-11	CARBON 1K 5%	1/4W
C7387	1-162-911-11	CERAMIC CHIP 6PF	0.50PF 50V	R7328	1-216-824-11	METAL CHIP 1.8K 5%	1/10W
C7388	1-162-913-11	CERAMIC CHIP 8PF	0.50PF 50V	R7329	1-260-095-11	CARBON 470 5%	1/2W
C7390	1-162-911-11	CERAMIC CHIP 6PF	0.50PF 50V	R7330	1-215-903-11	METAL OXIDE 68K 5%	2W
C7391	1-162-913-11	CERAMIC CHIP 8PF	0.50PF 50V	R7334	1-216-819-11	METAL CHIP 680 5%	1/10W
< CONNECTOR >				R7335	1-216-824-11	METAL CHIP 1.8K 5%	1/10W
CN7300	* 1-564-508-11	PLUG, CONNECTOR 5P		R7350	1-249-417-11	CARBON 1K 5%	1/4W
CN7301	* 1-564-512-11	PLUG, CONNECTOR 9P		R7356	1-216-824-11	METAL CHIP 1.8K 5%	1/10W
CN7311	1-695-915-11	TAB (CONTACT)		R7357	1-260-095-11	CARBON 470 5%	1/2W
CN7333	1-695-915-11	TAB (CONTACT)		R7358	1-215-903-11	METAL OXIDE 68K 5%	2W
< DIODE >				R7363	1-216-819-11	METAL CHIP 680 5%	1/10W
D7300	8-719-911-19	DIODE 1SS119-25		R7364	1-216-824-11	METAL CHIP 1.8K 5%	1/10W
D7325	8-719-911-19	DIODE 1SS119-25		R7373	1-216-823-11	METAL CHIP 1.5K 5%	1/10W
D7350	8-719-911-19	DIODE 1SS119-25		R7374	1-216-819-11	METAL CHIP 680 5%	1/10W
D7375	8-719-991-33	DIODE 1SS133T-77		R7375	1-216-839-11	METAL CHIP 33K 5%	1/10W
D7376	8-719-991-33	DIODE 1SS133T-77		R7376	1-216-833-11	METAL CHIP 10K 5%	1/10W
D7378	8-719-109-89	DIODE RD5.6ESB2		R7377	1-216-834-11	METAL CHIP 12K 5%	1/10W
D7379	8-719-109-89	DIODE RD5.6ESB2		R7379	1-216-833-11	METAL CHIP 10K 5%	1/10W
< IC >				R7380	1-216-833-11	METAL CHIP 10K 5%	1/10W
IC7300	8-759-360-83	IC TDA6111Q/N4		R7381	1-216-833-11	METAL CHIP 10K 5%	1/10W
IC7325	8-759-360-83	IC TDA6111Q/N4		R7382	1-202-549-00	SOLID 100 20%	1/2W
IC7350	8-759-360-83	IC TDA6111Q/N4		R7383	1-216-349-00	METAL OXIDE 1 5%	1W
< SOCKET >				R7385	1-202-549-00	SOLID 100 20%	1/2W
J7376	£ * 1-451-544-11	SOCKET, CRT		R7387	1-247-735-11	CARBON 47 5%	1/2W
< COIL >				R7389	1-247-881-00	CARBON 120K 5%	1/4W
L7375	1-414-928-21	INDUCTOR 1UH		R7390	1-249-417-11	CARBON 1K 5%	1/4W
L7376	£ 1-532-637-00	IC LINK 1A		R7391	1-216-824-11	METAL CHIP 1.8K 5%	1/10W
L7378	1-414-928-21	INDUCTOR 1UH		R7392	1-216-819-11	METAL CHIP 680 5%	1/10W
< TRANSISTOR >				R7393	1-216-823-11	METAL CHIP 1.5K 5%	1/10W
Q7350	8-729-901-06	TRANSISTOR DTA144EK		R7394	1-249-417-11	CARBON 1K 5%	1/4W
Q7352	8-729-421-19	TRANSISTOR UN2213		R7395	1-216-824-11	METAL CHIP 1.8K 5%	1/10W
Q7353	8-729-421-19	TRANSISTOR UN2213		R7396	1-216-819-11	METAL CHIP 680 5%	1/10W
Q7354	8-729-901-06	TRANSISTOR DTA144EK		R7397	1-216-823-11	METAL CHIP 1.5K 5%	1/10W
Q7355	8-729-421-19	TRANSISTOR UN2213		R7398	1-249-417-11	CARBON 1K 5%	1/4W
< RESISTOR >				R7399	1-216-824-11	METAL CHIP 1.8K 5%	1/10W
JR7301	1-216-864-11	SHORT CHIP 0		< RESISTOR VARIABLE >			
R7300	1-249-417-11	CARBON 1K 5%	1/4W	RV7375	1-241-656-21	RES, ADJ, METAL FILM 110M	
R7303	1-216-824-11	METAL CHIP 1.8K 5%	1/10W	* A-1302-134-A F1 Board, Complete			
R7304	1-260-095-11	CARBON 470 5%	1/2W	4-206-220-01	HOLDER, LED		
R7305	1-215-903-11	METAL OXIDE 68K 5%	2W	* 4-374-846-01	COVER, CAPACITOR, CAP TYPE		
R7309	1-216-824-11	METAL CHIP 1.8K 5%	1/10W	< CAPACITOR >			
R7310	1-216-819-11	METAL CHIP 680 5%	1/10W	C0982	1-104-665-11	ELECT 100UF 20.00% 25V	
				C0983	1-102-114-00	CERAMIC 470PF 10.00% 50V	
				C0984	1-102-129-00	CERAMIC 0.01UF 10.00% 50V	
				C6400	1-113-924-11	CERAMIC 0.0047UF 20.00% 250V	

**Note :** The components identified by shading and marked  $\Delta$  are critical for safety. Replace only with the part numbers specified in the parts list.

**F1**

**H1**

**M2**

REF.NO.	PART.NO	DESCRIPTION	REMARK	REF.NO.	PART.NO	DESCRIPTION	REMARK
< CONNECTOR >				< RESISTOR >			
CN0981	* 1-564-507-11	PLUG, CONNECTOR 4P		JR0901	1-216-864-11	SHORT CHIP 0	
CN6400	£ * 1-580-843-11	PIN, CONNECTOR (POWER)		JR2901	1-216-864-11	SHORT CHIP 0	
CN6401	£ * 1-691-291-11	PIN, CONNECTOR (PC BOARD) 5P		JR2902	1-216-864-11	SHORT CHIP 0	
CN6403	1-695-915-11	TAB (CONTACT)		R0901	1-218-867-11	METAL CHIP 6.8K 0.5% 1/10W	
< DIODE >				R0902	1-216-864-11	SHORT CHIP 0	
D0981	8-719-109-89	DIODE RD5.6ESB2		R0911	1-216-833-11	METAL CHIP 10K 5% 1/10W	
D0983	8-719-082-12	DIODE TLHK5190		R0912	1-216-835-11	METAL CHIP 15K 5% 1/10W	
< FUSE >				R0913	1-216-827-11	METAL CHIP 3.3K 5% 1/10W	
F6400	£ 1-576-232-11	FUSE (H.B.C.) 5A/250V		R0914	1-216-823-11	METAL CHIP 1.5K 5% 1/10W	
	£ 1-533-725-11	FUSE HOLDER (F6400)		R2901	1-249-406-11	CARBON 120 5% 1/4W	
< IC >				R2902	1-249-406-11	CARBON 120 5% 1/4W	
IC0981	6-600-129-01	IC RPM7140-H5		R2903	1-249-406-11	CARBON 120 5% 1/4W	
< RESISTOR >				R2904	1-249-406-11	CARBON 120 5% 1/4W	
R0982	1-247-807-31	CARBON 100 5% 1/4W		R2909	1-216-853-11	METAL CHIP 470K 5% 1/10W	
R6400	£ 1-202-719-00	SOLID 1M 10% 1/2W		R2910	1-216-853-11	METAL CHIP 470K 5% 1/10W	
< SWITCH >				R2917	1-216-821-11	METAL CHIP 1K 5% 1/10W	
S6400	£ 1-571-433-21	SWITCH, PUSH (AC POWER)		R2918	1-216-821-11	METAL CHIP 1K 5% 1/10W	
< VARISTOR >				< SWITCH >			
VDR6400	£ 1-803-830-11	VARISTOR (ERZV14D621)		S0900	1-692-431-21	SWITCH, TACTILE	
<b>* A-1302-135-A H1 Board, Complete</b>				S0901	1-692-431-21	SWITCH, TACTILE	
< CAPACITOR >				S0902	1-692-431-21	SWITCH, TACTILE	
C2904	1-162-964-11	CERAMIC CHIP 0.001UF 10.00% 50V		S0903	1-692-431-21	SWITCH, TACTILE	
C2906	1-126-960-11	ELECT 1UF 20.00% 50V		S0904	1-692-431-21	SWITCH, TACTILE	
C2907	1-126-960-11	ELECT 1UF 20.00% 50V		S0905	1-692-431-21	SWITCH, TACTILE	
C2931	1-162-964-11	CERAMIC CHIP 0.001UF 10.00% 50V		<b>* A-1404-964-A M2 Board, Complete</b>			
< CONNECTOR >				1-540-151-21	SOCKET, IC		
CN2900	1-779-947-11	TERMINAL BLOCK, S		< CAPACITOR >			
CN2909	* 1-564-512-11	PLUG, CONNECTOR 9P		C0001	1-107-826-11	CERAMIC CHIP 0.1UF 10.00% 16V	
CN2910	* 1-564-509-11	PLUG, CONNECTOR 6P		C0002	1-107-826-11	CERAMIC CHIP 0.1UF 10.00% 16V	
< DIODE >				C0004	1-164-360-11	CERAMIC CHIP 0.1UF 16V	
D0908	8-719-923-60	DIODE MTZJ-T-77-9.1A		C0006	1-126-934-11	ELECT 220UF 20.00% 16V	
< SOCKET >				C0007	1-107-826-11	CERAMIC CHIP 0.1UF 10.00% 16V	
J2901	1-750-264-11	JACK		C0008	1-107-826-11	CERAMIC CHIP 0.1UF 10.00% 16V	
				C0009	1-165-128-11	CERAMIC CHIP 0.22UF 16V	
				C0010	1-162-927-11	CERAMIC CHIP 100PF 5.00% 50V	
				C0012	1-162-924-11	CERAMIC CHIP 56PF 5.00% 50V	
				C0013	1-164-360-11	CERAMIC CHIP 0.1UF 16V	
				C0015	1-135-834-91	CERAMIC CHIP 2.2E+06PF 6.3V	
				C0016	1-165-128-11	CERAMIC CHIP 0.22UF 16V	
				C0017	1-162-924-11	CERAMIC CHIP 56PF 5.00% 50V	
				C0019	1-164-360-11	CERAMIC CHIP 0.1UF 16V	
				C0020	1-162-923-11	CERAMIC CHIP 47PF 5.00% 50V	
				C0021	1-107-826-11	CERAMIC CHIP 0.1UF 10.00% 16V	
				C0022	1-115-416-11	CERAMIC CHIP 0.001UF 5.00% 25V	



REF.NO.	PART.NO	DESCRIPTION	REMARK	REF.NO.	PART.NO	DESCRIPTION	REMARK
C0024	1-115-416-11	CERAMIC CHIP 0.001UF	5.00% 25V	FB0031	1-414-760-21	FERRITE	0UH
C0025	1-162-962-11	CERAMIC CHIP 470PF	10.00% 50V	FB0032	1-414-760-21	FERRITE	0UH
C0026	1-162-962-11	CERAMIC CHIP 470PF	10.00% 50V	< IC >			
C0027	1-162-962-11	CERAMIC CHIP 470PF	10.00% 50V	IC0001	8-759-699-33	IC M24C16-MN6T(A)	
C0028	1-126-934-11	ELECT 220UF	20.00% 16V	IC0002	6-702-515-01	IC SAA5665HL/M1D/0724	
C0029	1-164-360-11	CERAMIC CHIP 0.1UF	16V	IC0003	8-759-672-39	IC PST5731MT	
C0030	1-164-360-11	CERAMIC CHIP 0.1UF	16V	IC0004	8-759-665-11	IC LM393DT	
C0031	1-164-360-11	CERAMIC CHIP 0.1UF	16V	IC0005	6-702-395-01	IC K6F2008V2E-YF70T	
C0032	1-164-360-11	CERAMIC CHIP 0.1UF	16V	IC0006	6-704-221-01	IC M27W201-80K6-FQ100	
C0034	1-115-416-11	CERAMIC CHIP 0.001UF	5.00% 25V	IC0007	8-759-271-86	IC TC7SH04FU	
C0035	1-115-416-11	CERAMIC CHIP 0.001UF	5.00% 25V	IC0008	8-759-392-01	IC TC7SH86FU-TE85R	
C0036	1-115-416-11	CERAMIC CHIP 0.001UF	5.00% 25V	IC0010	8-759-523-81	IC TC74VHC08FT(EL)	
C0037	1-115-416-11	CERAMIC CHIP 0.001UF	5.00% 25V	< TRANSISTOR >			
C0038	1-115-416-11	CERAMIC CHIP 0.001UF	5.00% 25V	Q0002	8-729-424-08	TRANSISTOR UN2111	
C0039	1-107-826-11	CERAMIC CHIP 0.1UF	10.00% 16V	Q0003	8-729-424-08	TRANSISTOR UN2111	
C0042	1-115-416-11	CERAMIC CHIP 0.001UF	5.00% 25V	Q0006	8-729-010-29	TRANSISTOR MSD601-RST1	
C0047	1-115-416-11	CERAMIC CHIP 0.001UF	5.00% 25V	Q0007	8-729-027-44	TRANSISTOR DTC114TKA-T146	
< CONNECTOR >				Q0008	8-729-027-44	TRANSISTOR DTC114TKA-T146	
CN0001	* 1-793-497-11	CONNECTOR, BOARD TO BOARD 40P		Q0009	8-729-027-44	TRANSISTOR DTC114TKA-T146	
CN0003	1-817-040-81	PLUG, CONNECTOR 3P		Q0010	8-729-027-44	TRANSISTOR DTC114TKA-T146	
< DIODE >				Q0011	8-729-010-29	TRANSISTOR MSD601-RST1	
D0001	6-500-079-01	DIODE BAS40-05E6327		Q0012	8-729-424-08	TRANSISTOR UN2111	
D0201	8-719-069-55	DIODE UDZSTE-175.6B		Q0013	8-729-421-22	TRANSISTOR UN2211	
D0202	8-719-069-55	DIODE UDZSTE-175.6B		< RESISTOR >			
D0203	8-719-069-55	DIODE UDZSTE-175.6B		R0001	1-216-819-11	METAL CHIP 680 5% 1/10W	
D0204	8-719-069-55	DIODE UDZSTE-175.6B		R0002	1-216-824-11	METAL CHIP 1.8K 5% 1/10W	
D0301	8-719-069-56	DIODE UDZSTE-176.2B		R0003	1-216-809-11	METAL CHIP 100 5% 1/10W	
< FERRITE BEAD >				R0004	1-216-813-11	METAL CHIP 220 5% 1/10W	
FB0003	1-216-864-11	SHORT CHIP 0		R0011	1-216-809-11	METAL CHIP 100 5% 1/10W	
FB0004	1-216-864-11	SHORT CHIP 0		R0014	1-216-837-11	METAL CHIP 22K 5% 1/10W	
FB0005	1-216-295-91	SHORT CHIP 0		R0016	1-216-809-11	METAL CHIP 100 5% 1/10W	
FB0006	1-412-006-31	INDUCTOR 10UH		R0017	1-216-843-11	METAL CHIP 68K 5% 1/10W	
FB0007	1-412-006-31	INDUCTOR 10UH		R0018	1-216-809-11	METAL CHIP 100 5% 1/10W	
FB0008	1-216-295-91	SHORT CHIP 0		R0019	1-216-833-11	METAL CHIP 10K 5% 1/10W	
FB0009	1-412-006-31	INDUCTOR 10UH		R0020	1-216-821-11	METAL CHIP 1K 5% 1/10W	
FB0010	1-216-295-91	SHORT CHIP 0		R0022	1-216-809-11	METAL CHIP 100 5% 1/10W	
FB0011	1-216-295-91	SHORT CHIP 0		R0023	1-216-845-11	METAL CHIP 100K 5% 1/10W	
FB0012	1-412-006-31	INDUCTOR 10UH		R0027	1-216-821-11	METAL CHIP 1K 5% 1/10W	
FB0015	1-216-295-91	SHORT CHIP 0		R0028	1-216-833-11	METAL CHIP 10K 5% 1/10W	
FB0016	1-216-295-91	SHORT CHIP 0		R0029	1-216-809-11	METAL CHIP 100 5% 1/10W	
FB0017	1-216-295-91	SHORT CHIP 0		R0030	1-216-809-11	METAL CHIP 100 5% 1/10W	
FB0018	1-216-295-91	SHORT CHIP 0		R0032	1-216-809-11	METAL CHIP 100 5% 1/10W	
FB0019	1-216-864-11	SHORT CHIP 0		R0033	1-216-809-11	METAL CHIP 100 5% 1/10W	
FB0020	1-216-864-11	SHORT CHIP 0		R0034	1-218-725-11	METAL CHIP 24K 0.5% 1/10W	
FB0021	1-216-864-11	SHORT CHIP 0		R0035	1-218-867-11	METAL CHIP 6.8K 0.5% 1/10W	
FB0022	1-412-006-31	INDUCTOR 10UH		R0037	1-216-827-11	METAL CHIP 3.3K 5% 1/10W	
				R0039	1-216-809-11	METAL CHIP 100 5% 1/10W	

REF.NO.	PART.NO	DESCRIPTION	REMARK		
R0040	1-216-809-11	METAL CHIP	100	5%	1/10W
R0041	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R0042	1-218-867-11	METAL CHIP	6.8K	0.5%	1/10W
R0043	1-216-803-11	METAL CHIP	33	5%	1/10W
R0044	1-216-809-11	METAL CHIP	100	5%	1/10W
R0045	1-216-803-11	METAL CHIP	33	5%	1/10W
R0046	1-216-803-11	METAL CHIP	33	5%	1/10W
R0047	1-216-810-11	METAL CHIP	120	5%	1/10W
R0048	1-216-809-11	METAL CHIP	100	5%	1/10W
R0049	1-216-833-11	METAL CHIP	10K	5%	1/10W
R0050	1-216-810-11	METAL CHIP	120	5%	1/10W
R0051	1-216-835-11	METAL CHIP	15K	5%	1/10W
R0052	1-216-810-11	METAL CHIP	120	5%	1/10W
R0053	1-216-809-11	METAL CHIP	100	5%	1/10W
R0054	1-216-809-11	METAL CHIP	100	5%	1/10W
R0055	1-216-809-11	METAL CHIP	100	5%	1/10W
R0056	1-216-833-11	METAL CHIP	10K	5%	1/10W
R0057	1-216-809-11	METAL CHIP	100	5%	1/10W
R0058	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
R0059	1-216-841-11	METAL CHIP	47K	5%	1/10W
R0060	1-216-833-11	METAL CHIP	10K	5%	1/10W
R0061	1-216-833-11	METAL CHIP	10K	5%	1/10W
R0062	1-216-833-11	METAL CHIP	10K	5%	1/10W
R0063	1-216-833-11	METAL CHIP	10K	5%	1/10W
R0064	1-216-833-11	METAL CHIP	10K	5%	1/10W
R0065	1-216-833-11	METAL CHIP	10K	5%	1/10W
R0066	1-218-871-11	METAL CHIP	10K	0.5%	1/10W
R0067	1-216-833-11	METAL CHIP	10K	5%	1/10W
R0068	1-216-833-11	METAL CHIP	10K	5%	1/10W
R0069	1-216-833-11	METAL CHIP	10K	5%	1/10W
R0070	1-216-809-11	METAL CHIP	100	5%	1/10W
R0071	1-216-809-11	METAL CHIP	100	5%	1/10W
R0072	1-216-809-11	METAL CHIP	100	5%	1/10W
R0073	1-216-809-11	METAL CHIP	100	5%	1/10W
R0074	1-216-809-11	METAL CHIP	100	5%	1/10W
R0075	1-216-809-11	METAL CHIP	100	5%	1/10W
R0076	1-216-821-11	METAL CHIP	1K	5%	1/10W
R0078	1-216-817-11	METAL CHIP	470	5%	1/10W
R0079	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R0082	1-216-864-11	SHORT CHIP	0		
R0083	1-216-809-11	METAL CHIP	100	5%	1/10W
R0084	1-216-809-11	METAL CHIP	100	5%	1/10W
R0110	1-216-813-11	METAL CHIP	220	5%	1/10W
R0111	1-216-813-11	METAL CHIP	220	5%	1/10W
R0112	1-216-813-11	METAL CHIP	220	5%	1/10W
R0113	1-216-813-11	METAL CHIP	220	5%	1/10W
R0114	1-216-813-11	METAL CHIP	220	5%	1/10W
R0115	1-216-813-11	METAL CHIP	220	5%	1/10W
R0116	1-216-813-11	METAL CHIP	220	5%	1/10W
R0117	1-216-813-11	METAL CHIP	220	5%	1/10W

REF.NO.	PART.NO	DESCRIPTION	REMARK		
R0118	1-216-813-11	METAL CHIP	220	5%	1/10W
R0119	1-216-813-11	METAL CHIP	220	5%	1/10W
R0120	1-216-813-11	METAL CHIP	220	5%	1/10W
R0121	1-216-813-11	METAL CHIP	220	5%	1/10W
R0122	1-216-813-11	METAL CHIP	220	5%	1/10W
R0123	1-216-813-11	METAL CHIP	220	5%	1/10W
R0301	1-216-833-11	METAL CHIP	10K	5%	1/10W
R0302	1-216-833-11	METAL CHIP	10K	5%	1/10W
R0303	1-216-836-11	METAL CHIP	18K	5%	1/10W
R0304	1-218-867-11	METAL CHIP	6.8K	0.5%	1/10W
< RESISTOR CHIP >					
RB0101	1-233-411-11	RES, CHIP NETWORK	220	(3216)	
RB0102	1-233-411-11	RES, CHIP NETWORK	220	(3216)	
RB0103	1-233-411-11	RES, CHIP NETWORK	220	(3216)	
RB0104	1-233-411-11	RES, CHIP NETWORK	220	(3216)	
RB0105	1-233-411-11	RES, CHIP NETWORK	220	(3216)	
RB0107	1-233-411-11	RES, CHIP NETWORK	220	(3216)	
RB0108	1-233-411-11	RES, CHIP NETWORK	220	(3216)	
< CRYSTAL >					
X0001	1-578-774-71	VIBRATOR, CRYSTAL			
* A-1300-627-A VM Board, Complete					
4-382-854-01		SCREW (M3X8), P, SW (+)			
< CAPACITOR >					
C7401	1-126-935-11	ELECT	470UF	20.00%	16V
C7403	1-126-935-11	ELECT	470UF	20.00%	16V
C7404	1-115-339-11	CERAMIC CHIP	0.1UF	10.00%	50V
C7405	1-126-933-11	ELECT	100UF	20.00%	16V
C7406	1-126-935-11	ELECT	470UF	20.00%	16V
C7407	1-107-364-11	MYLAR	0.01UF	10.00%	200V
C7408	1-107-364-11	MYLAR	0.01UF	10.00%	200V
C7409	1-107-649-11	ELECT	2.2UF	20.00%	250V
C7410	1-130-471-00	MYLAR	0.001UF	5.00%	50V
C7411	1-130-471-00	MYLAR	0.001UF	5.00%	50V
C7412	1-126-935-11	ELECT	470UF	20.00%	16V
C7413	1-126-935-11	ELECT	470UF	20.00%	16V
C7414	1-107-652-11	ELECT	10UF	20.00%	250V
C7415	1-107-363-91	MYLAR	0.0068UF	10.00%	200V
C7418	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C7421	1-163-251-11	CERAMIC CHIP	100PF	5.00%	50V
< CONNECTOR >					
CN7442	* 1-564-508-11	PLUG, CONNECTOR	5P		
CN7443	* 1-564-506-11	PLUG, CONNECTOR	3P		
CN7444	* 1-770-723-11	CONNECTOR, BOARD TO BOARD	8P		

REF.NO.	PART.NO	DESCRIPTION	REMARK	REF.NO.	PART.NO	DESCRIPTION	REMARK
< DIODE >				R7420	1-249-421-11	CARBON 2.2K 5%	1/4W
D7400	8-719-991-33	DIODE 1SS133T-77		R7421	1-249-389-11	CARBON 4.7 5%	1/4W
D7401	8-719-991-33	DIODE 1SS133T-77		R7422	1-249-405-11	CARBON 100 5%	1/4W
D7402	1-535-303-00	LEAD, JUMPER (5.0MM)		R7423	1-215-915-11	METAL OXIDE 470 5%	3W
D7403	8-719-991-33	DIODE 1SS133T-77		R7427	1-216-025-11	RES-CHIP 100 5%	1/10W
D7404	8-719-991-33	DIODE 1SS133T-77		R7428	1-216-033-00	RES-CHIP 220 5%	1/10W
D7405	8-719-924-11	DIODE MTZJ-T-77-22		R7429	1-216-033-00	RES-CHIP 220 5%	1/10W
D7406	8-719-924-11	DIODE MTZJ-T-77-22		R7432	1-216-065-91	RES-CHIP 4.7K 5%	1/10W
< FERRITE BEAD >				R7433	1-249-395-11	CARBON 15 5%	1/4W
FB7400	1-535-303-00	LEAD, JUMPER (5.0MM)		R7434	1-249-395-11	CARBON 15 5%	1/4W
FB7401	1-535-303-00	LEAD, JUMPER (5.0MM)		R7435	1-216-031-00	RES-CHIP 180 5%	1/10W
< COIL >				R7436	1-216-049-11	RES-CHIP 1K 5%	1/10W
L7400	1-414-934-21	INDUCTOR 10UH					
L7402	1-414-934-21	INDUCTOR 10UH					
L7403	1-414-934-21	INDUCTOR 10UH					
< TRANSISTOR >							
Q7400	8-729-010-29	TRANSISTOR MSD601-RST1					
Q7401	8-729-010-29	TRANSISTOR MSD601-RST1					
Q7402	8-729-010-29	TRANSISTOR MSD601-RST1					
Q7403	8-729-119-78	TRANSISTOR 2SC2785-HFE					
Q7404	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R					
Q7405	8-729-026-39	TRANSISTOR 2SA933AS-QT					
Q7406	8-729-045-05	TRANSISTOR 2SA2005					
Q7407	8-729-045-04	TRANSISTOR 2SC5511					
Q7408	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R					
Q7409	8-729-010-29	TRANSISTOR MSD601-RST1					
< RESISTOR >							
R7400	1-216-017-91	RES-CHIP 47 5%	1/10W				
R7401	1-216-061-91	RES-CHIP 3.3K 5%	1/10W				
R7402	1-216-041-00	RES-CHIP 470 5%	1/10W				
R7403	1-249-393-11	CARBON 10 5%	1/4W				
R7404	1-249-413-11	CARBON 470 5%	1/4W				
R7405	1-216-065-91	RES-CHIP 4.7K 5%	1/10W				
R7407	1-249-411-11	CARBON 330 5%	1/4W				
R7409	1-216-029-00	RES-CHIP 150 5%	1/10W				
R7410	1-216-017-91	RES-CHIP 47 5%	1/10W				
R7411	1-216-017-91	RES-CHIP 47 5%	1/10W				
R7412	1-216-017-91	RES-CHIP 47 5%	1/10W				
R7413	1-249-414-11	CARBON 560 5%	1/4W				
R7414	1-249-432-11	CARBON 18K 5%	1/4W				
R7415	1-247-739-11	CARBON 100 5%	1/2W				
R7416	1-249-389-11	CARBON 4.7 5%	1/4W				
R7417	1-249-432-11	CARBON 18K 5%	1/4W				
R7418	1-249-414-11	CARBON 560 5%	1/4W				
R7419	1-249-421-11	CARBON 2.2K 5%	1/4W				



**Note :** The components identified by shading and marked  $\Delta$  are critical for safety. Replace only with the part numbers specified in the parts list.

REF.NO.	PART.NO	DESCRIPTION	REMARK	REF.NO.	PART.NO	DESCRIPTION	REMARK
<b>MISCELLANEOUS</b>							
£	1-571-433-21	SWITCH, PUSH (AC POWER)					
£	1-823-853-11	CORD, POWER (KV-32FQ70B/32FQ70E/32FQ70K)					
£	1-776-860-11	POWER CORD, FILTER (UK) (KV-32FQ70U)					
	1-424-855-11	COIL, CHOKE 29MMH					
	8-598-535-20	FRONTEND BTF-EF411 (KV-32FQ70B)					
	8-598-533-10	FRONTEND BTF-EC411 (KV-32FQ70E/32FQ70K)					
	8-598-529-10	FRONTEND BTF-EU611 (KV-32FQ70U)					
£	1-453-444-11	TRANSFORMER ASSY, FLYBACK (NX-6020//Z2B4)					
	1-529-408-11	SPEAKER (4.2X24CM)					
	1-529-417-11	SPEAKER (8CM)					
£	1-451-480-22	DEFLECTION YOKE (Y32RVC2)					
	1-419-363-11	COIL, NA ROTATION					
£	8-453-011-11	NECK ASSY, (NA299-M)					
£	1-424-888-11	COIL, DEGAUSSING					
£	1-251-374-33	CAP ASSY, HIGH VOLTAGE					
£	8-735-079-05	PICTURE TUBE (W76LLZ060X)					
	1-452-094-00	MAGNET, ROTATABLE DISK; 15MM					
	1-452-032-00	MAGNET, DISK; 10MM					
<b>ACCESSORIES AND PACKAGING MATERIALS</b>							
	*4-046-772-01	BAG, PROTECTION					
	*4-087-594-01	INDIVIDUAL CARTON					
	*4-094-270-01	CUSHION UPPER					
	*4-094-271-01	CUSHION LOWER					
	4-093-901-41	MANUAL, INSTRUCTION (KV-32FQ70B) (GERMAN/ITALIAN/FRENCH/DUTCH)					
	4-093-901-51	MANUAL, INSTRUCTION (KV-32FQ70B) (ENGLISH)					
	4-093-901-11	MANUAL, INSTRUCTION (KV-32FQ70E) (GERMAN/TURKISH/GREEK)					
	4-093-901-21	MANUAL, INSTRUCTION (KV-32FQ70E) (ITALIAN)					
	4-093-901-31	MANUAL, INSTRUCTION (KV-32FQ70E) (NORWEGIAN/PORTUGUESE/SWEDISH/FINNISH/ DANISH/SPANISH)					
	4-093-901-71	MANUAL, INSTRUCTION (KV-32FQ70K) (BULGARIAN/CZECH/ENGLISH/HUNGARIAN/ RUSSIAN/POLISH)					
	4-093-901-61	MANUAL, INSTRUCTION (KV-32FQ70U) (ENGLISH)					
<b>REMOTE COMMANDER</b>							
	1-477-259-13	REMOTE COMMANDER (RM-938)					

# TRACE

A new TV Repair Assistance Tool that combines ease of use and powerful PC software tools to allow you to save valuable time during many TV repairs.



The TRACE interface connects to the PC's serial port. It provides connection to the TV's I<sup>2</sup>C bus and can be provided with an InfraRed transmitter (optional).

The interface is powered by a standard 9 V PP3 battery for portable use, and can also be powered by an external 9V/25mA DC power supply.

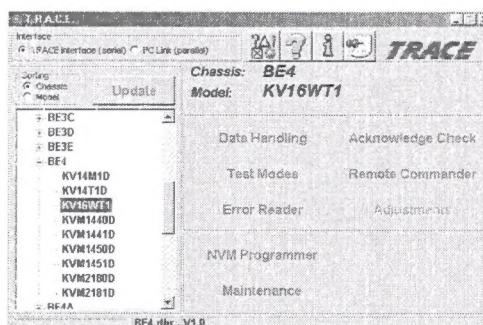
The TRACE software that is supplied with the interface allows you to:

- Read, restore and compare NVM contents via the I<sup>2</sup>C bus
- Acknowledge check of all I<sup>2</sup>C devices in the TV set
- Read Error Codes (emulation of the Error Reader tool)

With the optional IR Add-on kit, the following features can be added:

- Remote Commander emulation
- User programmable Functional Check through Infrared
- Fast and documented Test Mode setting of all Sony TV chassis

Additional features such as Adjustments and Troubleshooting are available in chassis-dependent software modules. Please contact your local Sony Service organisation for the latest information.



*Note: For workshops already using the existing I<sup>2</sup>C Link parallel port interface (9-948-320-30), this software can be used as well, replacing the TV Data Handling software (9-948-340-50), but Error Reader and IR functions can only be accessed with the TRACE interface.*

Partnumbers: TRACE Starter Kit (TRACE interface + software): 9-948-320-70  
 TRACE Software (for users of the I<sup>2</sup>C Link interface): 9-948-340-80  
 TRACE IR Add-on (IR interface + Remote Commander software): 9-948-320-80

PC requirements: IBM-compatible PC with operating system Windows95, Windows98, or WindowsNT\*.

\* WindowsNT only supported with TRACE interface

**Sony Corporation**  
**Sony UK**  
**Service Promotions Dept.**

**English**  
 03BP7100-1